

**Study and Report on Outpatient Therapy Utilization:
Physical Therapy, Occupational Therapy, and
Speech-Language Pathology Services Billed to
Medicare Part B in All Settings in 1998, 1999 and 2000**

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**Study and Report on Outpatient Therapy Utilization:
Physical Therapy, Occupational Therapy, and Speech-Language Pathology Services
Billed to Medicare Part B in All Settings in 1998, 1999 and 2000**

1.0 INTRODUCTION

As part of the Balanced Budget Reconciliation Act of 1999¹ (BBRA), Congress requested that the Centers for Medicare and Medicaid Services (CMS) deliver a study of utilization patterns (including nationwide patterns, and patterns by region, types of settings, and diagnosis or condition) of outpatient therapy services covered under Medicare. The report was to compare therapy services provided on or after January 1, 2000 with utilization patterns for services provided in 1998 and 1999. The primary purpose of this current study was to meet the requirements of the BBRA Study and Report on Utilization.

Over the past decade, CMS had been expending increased resources to pay for Part B therapy services under Medicare. As a result, in the Balanced Budget Act (BBA) of 1997², Congress instituted annual per-beneficiary financial caps on outpatient therapy services that were effective on 1 January 1999. Simultaneously, the Medicare Physician Fee Schedule (MPFS) was applied to institutional providers of these outpatient services. Subsequently, Congress instituted a moratorium on the enforcement of the financial caps, beginning 1 January 2000³. The moratorium is currently slated to expire on 31 December 2002. Barring additional legislative action, the application of the financial caps would again become effective beginning 1 January 2003.

Because of the simultaneous application of these two significant policy changes in 1999, this study was designed to determine the utilization changes that resulted from the transition to the MPFS by institutional providers, independent of the changes that resulted from the application of the financial caps. The study design incorporated analysis of the multiple factors that influenced utilization and which were measurable. The following report will provide background descriptions of the types of outpatient therapy services covered under Medicare, the types of providers that furnished such services, and a brief history of Medicare cost containment measures and policy changes related to outpatient therapy services during the period under study. The study analyzed claims data from the entire universe of over 15 million outpatient therapy claims per calendar year, using a methodology that was consistent with published requirements for the reporting of outpatient therapy services for the purposes of tracking the financial limitations that were in effect in 1999.

¹ H.R. 3426, The Medicare, Medicaid, and SCHIP Balanced Budget Refinement Act of 1999, as incorporated into P.L. 106-113, Consolidated Appropriations for FY 2000, enacted November 29, 1999.

² H.R. 2015, Medicare and Medicaid Provisions as incorporated into Title IV of P.L. 105-33, the Balanced Budget Act of 1997, enacted August 5, 1997.

³ H.R. 5661, The Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000, as incorporated into Sec.421 of P.L. 106-554, The Consolidated Appropriations Act, enacted December 21, 2000.

The study results include the following types of descriptive analysis of utilization from 1998 to 2000: by beneficiary demographic characteristics - including age, race, gender, state and region of residence; by the setting where services were furnished, and by the patient's clinical condition as reported in the claims data. Measurements of utilization included: the number of unique beneficiaries receiving outpatient therapy services; the volume of claims; the volume of billed procedure units; utilization by month of service delivery; and Medicare payments for outpatient therapy services. In addition, comparisons of the utilization of outpatient therapy services to the entire Medicare enrollment database indicated trends in Medicare payments per enrolled beneficiary.

Additional analyses are also provided to indicate utilization trends by claim primary diagnoses, by types of procedures furnished, and by type of provider setting furnishing outpatient therapy services. Medicare payment benchmark tables are presented to indicate the independent influence of beneficiary demographic variables on outpatient therapy utilization.

2.0 BACKGROUND

2.1 Types of Outpatient Therapy Services Covered Under Medicare

Therapy services have been an essential benefit under the Medicare program since its enactment in 1965 with the passage of Title XVIII of the Social Security Act⁴. Generally, therapy services consist of physical therapy (PT), occupational therapy (OT), and speech-language pathology (SLP) services.

Current national Medicare policy defines speech-language pathology services as those services necessary for the diagnosis and treatment of speech and language disorders that result in communication disabilities, and for the diagnosis and treatment of swallowing disorders (dysphagia), regardless of the presence of a communication disability.^{5,6}

According to current national policy, occupational therapy is medically prescribed treatment concerned with improving or restoring functions which have been impaired by illness or injury or, where function has been permanently lost or reduced by illness or injury, to improve the individual's ability to perform those tasks required for independent functioning.⁷

Physical therapy services are not defined in any current Medicare manual, or in the relevant law and regulations, except by the specification of the type of providers that can bill for the services, and by the conditions under which Medicare will cover them.⁸

Section 1862 (a)(20) of the Social Security Act (the Act) identifies that outpatient PT services and outpatient OT services may be furnished as an incident to a physician's professional services, and these may include services furnished by unlicensed personnel. These "incident to" services must meet all other standards and conditions, other than licensure requirements, that would apply to such therapy services if furnished by a therapist.

Table 1 contains some examples of the types of services that might be furnished under a PT, OT or SLP Plan of Treatment.

⁴ P.L. 89-73, 1965 revisions to the Social Security Act, Title XVIII -Health Insurance for the Aged.

⁵ *Medicare Intermediary Manual*, Pub. 13 Section 3101.10A (1). Speech Pathology Services Furnished by a Hospital or by Others Under Arrangements with a Hospital and Under Its Supervision

⁶ Social Security Act, Section 1861 (11).

⁷ *Medicare Intermediary Manual*, Pub. 13, Section 3101.9(A)

⁸ *Ibid.* Section 3101.8 (A)

Table 1. Examples of PT, OT and SLP Services

| | |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Physical Therapy | <ul style="list-style-type: none"> • A patient who has had a recent leg amputation needs skilled PT services to learn how to use and care for the prosthesis. • A patient whose ability to walk has been impaired by neurological, muscular, or skeletal abnormality needs gait evaluation and training. • A patient with a fracture, severe joint pain, or other medical or safety complication requires PT for muscle strengthening and range of motion exercises. |
| Occupational Therapy | <ul style="list-style-type: none"> • A recent upper extremity amputee requires skilled OT to functionally utilize a prosthesis. • A stroke patient with a paralyzed right side requires instruction in compensatory techniques to improve the level of independence in activities of daily living, e.g., learning how to perform self-care with one hand. • A hip fracture/hip replacement patient requires OT to increase standing tolerance and balance to enable him or her to perform functional activities such as dressing and homemaking tasks. |
| Speech-Language Pathology | <ul style="list-style-type: none"> • A patient with laryngeal cancer resulting in a laryngectomy requires SLP to develop new communication skills through esophageal speech and/or use of an electrolarynx. • A patient with Parkinson's Disease who experiences difficulty swallowing receives SLP services for instruction in positioning, diet consistencies, feeding modifications, and the use of self help devices to prevent choking. • A stroke patient receives SLP services to recover his or her ability to understand, speak, read and write. |

2.2 Types of Providers of Medicare Outpatient Therapy Services

Therapy services are furnished to Medicare beneficiaries by a variety of providers, in both inpatient (Part A) and outpatient (Part B) settings. For example, a patient who suffers a stroke might receive PT, OT and/or SLP services under Medicare Part A, first as an inpatient in a hospital, and then subsequently as an inpatient in a Skilled Nursing Facility (SNF) for a period of time. When the patient improves enough to be discharged from the SNF, he or she might receive additional Part A therapy from a Home Health Agency if homebound services are required. If the patient is not homebound, additional therapy under Part B could be provided, if necessary, in an outpatient department of an institution, a private practitioner's office, or in the patient's home.

Another example might be outpatient therapy services provided to a resident of a SNF whose room and board charges are paid by private funds or Medicaid. If this resident fell and fractured a leg, he or she might not have the three-day hospital stay required to qualify the resident for Medicare Part A services in the nursing home. Once the patient's cast is removed, PT and OT might be required to return the patient to his or her prior level of function for ambulation, transfers, self-care, daily activities, and so on. This patient's therapy could be billed by the nursing home to Part B of Medicare.

When therapy services are furnished, institutional providers submit their Medicare Part A and Part B claims to Fiscal Intermediaries (FIs) or Regional Home Health Intermediaries (RHHIs). Independent practitioners and other suppliers submit their Medicare Part B claims to Carriers or Durable Medical Equipment Regional Contractors (DMERCs).

Institutions that billed outpatient Part B therapy services to FIs during the years of this study included Hospitals, Skilled Nursing Facilities (SNFs), Comprehensive Outpatient

Rehabilitation Facilities (CORFs), Outpatient Rehabilitation Facilities or ORFs (more commonly known as Rehabilitation Agencies), and other institutions (e.g., Home Health Agencies, Ambulatory Surgical Centers).

Noninstitutional providers also billed carriers for outpatient Part B therapy services during the period of this study. These providers included Physical and Occupational Therapists in Private Practice (PTPP and OTPP), Physicians, and other specialty and group practices, such as Nurse Practitioners, Chiropractors, and Physician Assistants, which the study will refer to as Nonphysician practitioners.⁹

All outpatient therapy services, whether furnished by an institutional or noninstitutional provider are paid through the Medicare Part B Trust Fund, otherwise known as the Federal Supplementary Medical Insurance Trust Fund.

⁹ See Appendix B-3 for a list of specialties included in the ‘physician’ category of this study, and Appendix B-4 for a list of specialties included in the other ‘nonphysician’ category.

3.0 HISTORY OF RELEVANT COST CONTAINMENT MEASURES

Efforts to control the costs of outpatient therapy services began in 1972, with the implementation of salary equivalency cost report limitations for physical therapy services furnished by institutional providers. In 1998, the salary equivalency cost report limitations were extended to include occupational therapy and speech-language pathology services furnished by institutional providers, effective April 10, 1998.¹⁰ Also in 1998, there was a cost-minus-ten percent reduction applied to all Part B services furnished by institutions¹¹.

In 1999, consolidated billing provisions were applied to SNFs¹². These required that all Part A and Part B therapy services delivered to SNF residents be billed through the SNF provider number. Likewise, beginning in October 2000, any Part B therapy services (physical therapy, occupational therapy, or speech-language pathology) delivered while a beneficiary was under a Part A Home Health Plan of Care were to be provided either directly or under arrangement by the Home Health Agency¹³. These consolidated billing requirements prohibited other providers, such as rehabilitation agencies (ORFs), from billing Part B for therapy services furnished to beneficiaries who resided in SNFs, or who were being treated simultaneously by HHAs.

3.1 Application of the Medicare Physician Fee Schedule

On January 1, 1992, Medicare carriers implemented the Medicare Physician Fee Schedule (MPFS) for noninstitutional providers/suppliers (such as independently practicing OTs and PTs, and physicians) in accordance with section 1848 of the Social Security Act¹⁴. These suppliers billed for therapy procedures using a published list of procedure codes (HCPCS). There was a designated fee-schedule amount associated with each procedure code, which was adjusted annually.

Effective in 1998, in accordance with BBA requirements, institutional providers began to transition to the HCPCS coding system for Part B services. **This phased-in transition was completed for most institutional providers by early 1999. The implications of this transition period is significant for any data analysis that compares the number of units found in institutional outpatient billing for therapy from 1998 to 1999.** Once a provider transitioned to this system, it was required to list each individual procedure on each date of service. The definition of a unit varied (time-based or procedure-based) depending upon the particular procedure being billed. These definitions of individual units were significantly different from the way that most institutional providers had billed for therapy services prior to this time. These individual procedures were reimbursed according to the MPFS amounts beginning 1 January 1999.

¹⁰ Federal Register January 30, 1998, p. 5106.

¹¹ H.R. 2015, Medicare and Medicaid Provisions as incorporated into Sec. 4541(a) of P.L. 105-33, the Balanced Budget Act of 1997, enacted August 5, 1997.

¹² Federal Register November 2, 1998, p. 58861.

¹³ Federal Register July 3, 2000, p. 41127-41214.

¹⁴ Federal Register November 2, 1998, p. 58815.

An important consideration regarding expenditures for outpatient therapy claims during 1998-2000 is the underlying foundation of the MPFS. During this period, the work relative value units (RVUs) were in transition. As a result, the fee schedule amounts for most outpatient rehabilitation procedures were increasing, while other RVUs (e.g., surgical procedures) were declining. In addition, the practice expense RVUs for most outpatient therapy services HCPCS codes increased in response to provider concerns related to the size of office space needed to deliver these services¹⁵. This caused additional inflationary pressure on the price of therapy services furnished by noninstitutional providers. Table 2 below highlights the notable increases in the unadjusted federal rate for outpatient therapy evaluation procedure codes across the three years under study. Table 3 identifies the pricing for the most commonly billed outpatient therapy services during the same period. A more complete list of HCPCS pricing for CY 1998 through CY 2001 is located in appendix N of this report. Appendices S and T provide rank order frequencies of HCPCS procedures billed by setting and institutional provider revenue center variables.

Table 2. Federal Unadjusted HCPCS Pricing for Outpatient Therapy Evaluation Procedures 1998-2000.

| HCPCS Code | Description | 1998 Price | 1999 Price | 2000 Price | Change 98-99 | Change 99-00 | Change 98-00 |
|------------|----------------------|------------|------------|------------|--------------|--------------|--------------|
| 92506 | Speech evaluation | \$49.89 | \$54.53 | \$63.71 | 9.3% | 16.8% | 27.7% |
| 92525 | Dysphagia evaluation | \$92.09 | \$94.82 | \$103.98 | 3.0% | 9.7% | 12.9% |
| 97001 | PT evaluation | \$57.23 | \$57.65 | \$61.88 | 0.7% | 7.3% | 8.1% |
| 97002 | PT re-evaluation | \$22.01 | \$24.31 | \$29.29 | 10.4% | 20.5% | 33.1% |
| 97003 | OT evaluation | \$57.23 | \$59.39 | \$61.88 | 3.8% | 4.2% | 8.1% |
| 97004 | OT re-evaluation | \$22.01 | \$24.66 | \$28.92 | 12.0% | 17.3% | 31.4% |

Table 3. Federal Unadjusted HCPCS Pricing for Frequently Billed Outpatient Therapy Treatment Procedures 1998-2000

| HCPCS Code | Description | 1998 Price | 1999 Price | 2000 Price | Change 98-99 | Change 99-00 | Change 98-00 |
|------------|----------------------|------------|------------|------------|--------------|--------------|--------------|
| 92507 | Speech treatment | \$30.82 | \$35.77 | \$45.77 | 16.1% | 27.9% | 48.5% |
| 92526 | Dysphagia treatment | \$37.42 | \$42.72 | \$51.63 | 14.2% | 20.8% | 38.0% |
| 97035 | Ultrasound | \$11.37 | \$12.16 | \$12.45 | 6.9% | 2.4% | 9.5% |
| 97110 | Therapeutic exercise | \$20.54 | \$21.53 | \$23.43 | 4.8% | 8.8% | 14.1% |
| 97112 | Neuromuscular re-ed | \$20.18 | \$20.84 | \$24.53 | 3.3% | 17.7% | 21.6% |
| 97113 | Aquatic therapy | \$22.75 | \$23.27 | \$26.00 | 2.3% | 11.7% | 14.3% |
| 97116 | Gait training | \$17.98 | \$18.76 | \$21.97 | 4.3% | 17.1% | 22.2% |
| 97124 | Massage | \$16.14 | \$17.02 | \$20.14 | 5.4% | 18.3% | 24.7% |
| 97140 | Manual therapy | N/A | \$21.88 | \$26.73 | N/A | 22.2% | N/A |
| 97530 | Therapeutic activity | \$21.65 | \$21.88 | \$23.07 | 1.1% | 5.4% | 6.6% |
| 97535 | Self-care/home mgmt | \$22.01 | \$22.23 | \$25.26 | 1.0% | 13.7% | 14.8% |

It is also important to remember that the RVUs were calculated based upon data from salary equivalency guidelines and carrier-based noninstitutional practitioners,¹⁶ and may not have adequately reflected the practice expenses of institutional providers, whose operating costs tend to be greater, and who had previously been reimbursed under cost-

¹⁵ Federal Register November 2, 1999, p. 59404 and Federal Register November 1, 2000, p.65403

¹⁶ Federal Register June 5, 1998, p. 30832 and Federal Register November 2, 1998, p. 58817

based methodologies. CMS determined that there was no statutory language or legislative history to support a site-of-service differential in payments for institutional providers with higher operating costs. CMS further determined that the statute required the fee schedule to establish a “level playing field” for these services.¹⁷ As a result, despite increases in the fee schedule pricing in 1999, decreases in therapy reimbursement to institutional providers may have been much more precipitous because of switching from cost-based reimbursement to standardized fee schedule amounts. Moreover, the declines in reimbursement might have been even more significant in institutions with traditionally higher expenses, such as inner city or teaching hospitals, or areas with staffing recruitment challenges.

3.2 Progressive Implementation of Financial Caps

Under the provisions of the Balanced Budget Act of 1997 (BBA), beneficiaries were subject to an annual financial limitation for outpatient therapy services (except when furnished in hospital outpatient departments), effective January 1, 1999. These financial caps were \$1,500 per year per-beneficiary for physical therapy and speech-language pathology services combined, and \$1,500 per year per-beneficiary for occupational therapy services. Before this time, there was no limitation on per-beneficiary costs that could be billed to Medicare for therapy services furnished in institutional outpatient settings. Among the noninstitutional providers billing to carriers, PTs and OTs in private practice (PTPP and OTPP) had been subjected to a per-beneficiary financial cap for a number of years. In 1998, this cap had been \$900 per-beneficiary per year for each PTPP or OTPP provider. **With the passage of the BBA, the new \$1,500 caps applied to therapy services across all provider types (except hospital outpatient departments), beginning with calendar year 1999, including physician and other nonphysician practices.**

The exclusion of hospital outpatient departments from the application of the financial caps was intended to be a remedy for beneficiaries who truly required more than \$1,500 per year in therapy services. However, the simultaneous application of the consolidated billing requirements for SNFs, described in Section 3.0, prevented this remedy from being available to nursing home residents. In addition, the proposed remedy did not take into account the costs and complications that might be involved in transporting such a beneficiary to another institution for therapy, or potential continuity and/or quality of care issues that might result from transferring to a second provider.

Moreover, the implementation of the per-beneficiary caps for outpatient therapy imposed by the BBA was intended to be cumulative for the beneficiary across all providers (except hospital outpatient departments). In addition, the BBA allowed physician assistants (PAs), nurse practitioners (NPs), and clinical nurse specialists (CNSs) to provide rehabilitation services within the scope of their state licenses. These provisions meant that the financial limitations now applied to physicians and all other nonphysician practices that billed Medicare for certain rehabilitation procedures. Because of Y2K constraints, CMS was

¹⁷ Federal Register June 5, 1998, p. 30858 and Federal Register November 2, 1998, p. 58863

unable to implement the per-beneficiary caps cumulatively across all providers, and instead implemented per provider limitations.

The Balanced Budget Reform Act of 1999 (BBRA) suspended the financial limitations for therapy services during calendar years 2000 and 2001¹⁸. Congress subsequently extended this moratorium for an additional year¹⁹. With the enactment of the BBRA's suspension of the financial caps for Part B therapy services, financial limitations for PTPPs and OTPPs were eliminated for the first time. Tables 4 and 5 summarize relevant policy and the application of outpatient rehabilitation cost controls during 1998, 1999 and 2000, including the fee schedules (MPFS) and the annual financial caps.

¹⁸ H.R. 3426, The Medicare, Medicaid, and SCHIP Balanced Budget Refinement Act of 1999, as incorporated into P.L. 106-113, Consolidated Appropriations for FY 2000, enacted November 29, 1999.

¹⁹ H.R. 5661, The Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000, as incorporated into Sec. 421 of P.L. 106-554, The Consolidated Appropriations Act, enacted December 21, 2000.

Table 4. Chronological List of Relevant Policy Changes

| Year | Law, Regulation and Policy Relevant to Part B Therapy Services |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1972 | <ul style="list-style-type: none"> • Salary Equivalency applied to PT services in Institutional Providers • Annual per-beneficiary financial caps of \$100 applied to PT Private Practices |
| 1982 | <ul style="list-style-type: none"> • CORF Provider type was established |
| 1987 | <ul style="list-style-type: none"> • OT in Private Practice was recognized as a noninstitutional provider type, and annual per-beneficiary financial caps applied |
| 1992 | <ul style="list-style-type: none"> • Medicare Physician Fee Schedule (MPFS) was established as the reimbursement mechanism for all noninstitutional providers |
| 1998 | <ul style="list-style-type: none"> • Salary equivalency applied to OT and SLP services in institutional providers • Cost minus 10% reduction to all Part B therapy in institutional providers • Transition to HCPCS reporting by line item by day began for institutional Part B claims, which also redefined the “units” of therapy service • Annual per-beneficiary financial caps for PTPP and OTTP were \$900 |
| 1999 | <ul style="list-style-type: none"> • Transition to HCPCS reporting on institutional claims was completed • Institutions were reimbursed by MPFS for outpatient therapy procedures for the first time • CMS determined that there was no statutory basis to allow for any site-of-service differential in MPFS payments to institutions, despite the fact that RVUs had been based upon noninstitutional provider data, whose operating costs were lower than institutions • Physician Assistants, Nurse Practitioners and Clinical Nurse Practitioners were permitted to provide therapy services within the scope of their state licenses • Per-beneficiary annual financial caps applied to all provider types except outpatient hospital departments (\$1,500 for PT/SLP and \$1,500 for OT services). This raised the cap amounts for PT and OTs in private practice, and enacted financial caps on institutional providers, physicians and other nonphysician practitioners for the first time. SLP services rendered by institutional providers or by physician or other nonphysician practices were subjected to caps for the first time. • Caps were enforced on a per provider basis rather than cumulatively • Use of procedure code modifiers (GN, GO, GP) was mandated to identify the plan of care type (PT, OT, SLP) under which HCPCS were performed. This was intended to facilitate tracking of payments to the appropriate financial cap, and these were especially important to track ‘always therapy’ procedures performed by physicians and other nonphysician providers. Compliance was poor. • Consolidated billing provisions for SNFs affected their Part B therapy billing and precluded SNF residents from eligibility for additional therapy in outpatient hospital (uncapped) settings |
| 2000 | <ul style="list-style-type: none"> • Consolidated billing provisions were applied to Home Health Agencies • Enforcement of the financial caps was suspended across all provider types • MPFS reimbursement rates for the 56 most frequently occurring therapy procedures were increased, half of which increased more than 10% from 1999 rates. |

Table 3. Implementation of Outpatient (Part B) Therapy Cost Controls

| | Financial Caps | | Fee Schedule | |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------|-------------------------|
| | Noninstitutional Providers | Institutional Providers | Noninstitutional Providers | Institutional Providers |
| 1998 | OTPP ^(A) \$ 900 PTPP ^(B) \$ 900 SLP ^(C) N/A Physician Practice None Other Nonphysician None | NONE | YES | NO ^(G) |
| 1999 | OTPP \$1,500 PTPP \$1,500 SLP ^(C) N/A Physician Practice PT/SLP POC ^(D) \$1,500 OT POC \$1,500 Other Nonphysician PT/SLP POC \$1,500 OT POC \$1,500 | PT/SLP \$1,500 ^(E,F) OT \$1,500 ^(E,F) | YES | YES ^(G,H) |
| 2000-2002 | Suspended | Suspended | YES | YES |
| Future | ? | ? | ? | ? |

- A. OTPP = Occupational Therapist in Private Practice
B. PTPP = Physical Therapist in Private Practice
C. There is no provision to permit direct Medicare billing by Speech-Language Pathologists in Private Practice.
D. POC = Plan of Care
E. Excludes treatments in Hospital Outpatient Departments.
F. Use of procedure codes by institutions was required 4/98; but implementation was delayed in many areas until 10/98. The definition of a "unit" changed for most providers.
G. Excludes outpatient departments of Critical Access Hospitals, and outpatient therapy services furnished as part of a Partial Hospitalization Plan of Care.
H. Line item billing by day/by HCPCS and the use of the Medicare Physician Fee Schedule (MPFS) was required 1/99.

4.0 TECHNICAL APPROACH

4.1 Analysis of Cap Utilization

In order to analyze the utilization of therapy services before, during and after the financial caps, it was necessary to study all types of service to which the financial caps applied. For the purposes of identifying which expenditures should be included in the caps, CMS operationally defined outpatient therapy in two ways, and established a policy to track expenditures tied to the therapy financial limitations.²⁰ The first way that therapy service was defined was by the type of practitioner rendering the service, and the second was by the type of procedure being performed. Both of these variables were considered carefully in the study's technical approach, and then were defined operationally in the context of Medicare claims data.

Simply put, according to the first definition, any outpatient services or procedures rendered by or under the supervision of qualified physical therapists were PT services; services rendered by or under the supervision of qualified occupational therapists were OT services; and covered Part B SLP services were any procedures rendered by qualified speech-language pathologists. Whenever therapists or qualified therapy assistants rendered services, they were subject to the financial caps. Medicare claims data used in this study permitted clear identification of the services rendered by therapists in institutions through the use of Revenue Center codes. Among noninstitutional providers, PTs and OTs in private practice were identified through their provider numbers and their line provider specialty codes, which were contained in the claims data. SLPs in private practice are not a recognized independent provider under Medicare, so provider numbers or line specialty codes for SLPs do not exist.

A second, and much more complicated variable was used to identify services subject to the financial limitations. This involved the procedure rendered, rather than the person delivering it, since many procedures can be performed by more than one type of specialist. For the purpose of tracking dollars to the appropriate financial caps, the Centers for Medicare and Medicaid Services identified a group of specific procedure codes (HCPCS) that were considered "always therapy" regardless of who performed them²¹. For example, every time HCPCS 97110 (Therapeutic Exercise) was billed in 1999, the associated dollars should have been attributed to a beneficiary's \$1,500 PT/SLP cap, or to his/her \$1,500 OT cap. For all providers, the billing of these "always therapy" procedures was to be

²⁰ The Federal Register of June 5, 1998, pp. 30858-30859 stated that in addition to services furnished by PTs, OTs, and SLPs, the outpatient rehabilitation services HCPCS published in Addendum D of the June 5, 1998 Federal Register "furnished either directly or incident to the services of a physician or practitioner are always subject to the financial limitation. (p. 30859)." Additionally, the November 2, 1998 Federal Register, pp. 58865-58868 required the use of discipline-specific modifiers to track the financial limitations for any outpatient therapy services delivered by a qualified therapist, or for the HCPCS procedures identified in Addendum D of the June 5, 1998 Federal Register, when they were furnished by or under the supervision of a physician or other practitioner under a therapy plan of care.

²¹ Federal Register, November 2, 1998:58865-58868.

accompanied by a modifier code, identifying the type of plan of care (PT, OT or SLP) under which the services were furnished.

In institutions, these “always therapy” procedures should have been rendered only by or under the supervision of qualified PTs or OTs, or by qualified SLPs. Had some other department within an institution billed for these “always therapy” procedures, they would appear on a line item with a Revenue Center code other than PT, OT or SLP. In such a case, the use of the procedure modifier code would be required to identify the cap to which those dollars applied.

Using specific procedure codes to define therapy services poses several problems. This definition was intended for the purpose of tracking expenditures related to one of the financial caps. As previously mentioned, a procedure code modifier was to be used with these “always therapy” codes to denote the type of plan of care (PT, OT, or SLP) under which the services were furnished. While the payments for those procedures always should have been debited from one of the caps during 1999, in practice these services were not always delivered as part of a therapy plan of care. For example, a particular procedure might be delivered only once during a physician office visit, rather than as part of a formal therapy plan of treatment over a period of time. In addition, when these procedures were billed by a physician or other specialty practice (other than a PTPP or OTTP), there were no restrictions on the qualifications of the person who may have been delivering these procedures “incident to” a physician’s (or physician extender’s) services²².

In summary, for the purposes of tracking expenditures related to the caps, therapy services were any procedures rendered by a qualified therapist; or, any procedures that CMS defined as “always therapy”, regardless of who performed them. In the study, all claim records were classified into one of four therapy service types (PT, OT, SLP, and ‘Other’ therapy). Table 6 summarizes the settings, and the types of services within each setting that were included in this study.

²² Federal Register November 2, 1998, p. 58870.

Table 6. Outpatient Therapy Providers and Types of Therapy Services

| Provider Type | Setting | Type of Therapy Service | |
|------------------------------------------|----------------------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------|
| Institutional Providers | Hospital Outpatient (B) | PT only | |
| | | SLP only | |
| | | OT only | |
| | | Combination Claims | PT |
| | | | SLP |
| | | | OT |
| | | Other Department Billing an "Always Therapy" Code | |
| | Skilled Nursing Facility (SNF - B) | PT only | |
| | | SLP only | |
| | | OT only | |
| | | Combination Claims | PT |
| | | | SLP |
| | | | OT |
| | | Other Department Billing an "Always Therapy" Code | |
| | Comprehensive Outpatient Rehabilitation Facility (CORF - B) | PT only | |
| | | SLP only | |
| | | OT only | |
| | | Combination Claims | PT |
| | | | SLP |
| | | | OT |
| | | Other Department Billing an "Always Therapy" Code | |
| | Outpatient Rehabilitation Facility (ORF - B) (Rehabilitation Agency) | PT only | |
| | | SLP only | |
| | | OT only | |
| | | Combination Claims | PT |
| | | | SLP |
| | | | OT |
| | | Other Department Billing an "Always Therapy" Code | |
| | All Other Institutions (B) | PT only | |
| | | SLP only | |
| | | OT only | |
| | | Combination Claims | PT |
| | | | SLP |
| | | | OT |
| | | Other Department Billing an "Always Therapy" Code | |
| Noninstitutional Providers ²³ | PT Private Practice (PTPP) | PT | |
| | OT Private Practice (OTPP) | OT | |
| | Physician Practice (MD, DO, DPM, etc.) ²⁴ | Billing "Always Therapy" Procedures (HCPCS) | Type of Service identified as PT, OT or SLP (Modifier code used) |
| | | | Unknown Type of Service (Modifier not used) |
| | Other Nonphysician Practice ²⁵ | Billing "Always Therapy" Procedures (HCPCS) | Type of Service identified as PT, OT or SLP (modifier code used) |
| | | | Unknown Type of Service (Modifier not used) |

²³ Physician and Nonphysician specialties classified per Section 2207 of the Medicare Carriers Manual.

²⁴ See Appendix B-3 for a list of practitioners included in this category.

²⁵ See Appendix B-4 for a list of practitioners included in this category.

4.2 Identifying the Claims Universe for the Study

Because of the multiple policy issues affecting different settings, it was important to identify any payment migration across provider settings (e.g., from CORF to hospital outpatient). Increased utilization in one setting or provider type could be offset by reduced utilization elsewhere. Therefore, the conceptual model of the study design allowed for a description of changes in utilization patterns across the range of all settings as different regulatory changes occurred.

The data used in this study included the Medicare Enrollment Data Base (Denominator) file, the Provider of Services (POS) File, the Unique Physician Identification Number (UPIN) file, and all therapy service claims from the Medicare National Claims History (NCH) files for each of the three study years. Table 7 lists the specific criteria used to identify the universe of claims for this study. Any claim in the NCH files that contained any one of the identified codes was selected for the study.

Table 7. Selection Criteria for the Universe of Claims Data

| Revenue Center Codes | Level II HCPCS ²⁶ Codes | Level I HCPCS (CPT) Codes ²⁷ | Modifier Codes ²⁸ |
|----------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| 042X | V5362, V5363 V5364, G0129 G0151, G0152 | 11040-11044, 29065, 29075, 29085, 29105, 29125, 29126, 28130, 29131, 29200, 29220, 29240, 29260, 29280, 29345, 29365, 29405, 29445, 29505, 29515, 29520, 29530, 29540, 29550, 29580, 29590, 31505, 31575, 31579, 31599, 64550, 64999, 90901, 90911, 92506- 92510, 92520-92526, 92551-92598, 95831- 95834, 95851, 95852, 96105-96115, 97000- 97799, 98925-98929, 98940-98943 | GP |
| 043X | G0153, G0169 G0193, G0194 G0195, G0196 G0197, G0198 | | GO |
| 044X | G0199, G0200 G0201 | | GN |

Additional procedures were used to exclude from the study some claims or line items that were in the original universe defined above. Certain HCPCS and CPT codes in the selection criteria represent procedures that are not identified as “always therapy” services under Medicare, but which would be therapy if performed by a therapist. Also, as a result of these criteria, the claims originally selected included some that contained only chiropractic or osteopathic procedures. This was addressed by using the codes contained in *Physician Codes Always Subject to Outpatient Rehabilitation Financial Limitation*²⁹. New therapy HCPCS introduced in 1999 and 2000 were also included. For physician and other nonphysician practitioners, the claims were sorted into those that contained “always therapy” codes, and those that did not. Those claims without at least one “always therapy”

²⁶American Medical Association. Medicare’s National Level II Codes HCPCS. 12th Edition. Dover: Ingenix, Inc, 1999.

²⁷American Medical Association. Current Procedural Terminology, 4th Edition (CPT™). Chicago: American Medical Association, 1999.

²⁸Department of Health & Human Services, Health Care Financing Administration. Program Memorandum Intermediaries/Carriers. Consolidation of Program Memoranda for Outpatient Rehabilitation Therapy Services. PM AB-00-39, Change Request 1155, May 2000.

²⁹Federal Register, June 3, 1999, pp. 31008-31009, and Federal Register, November 2, 1998, pp. 58814-59190.

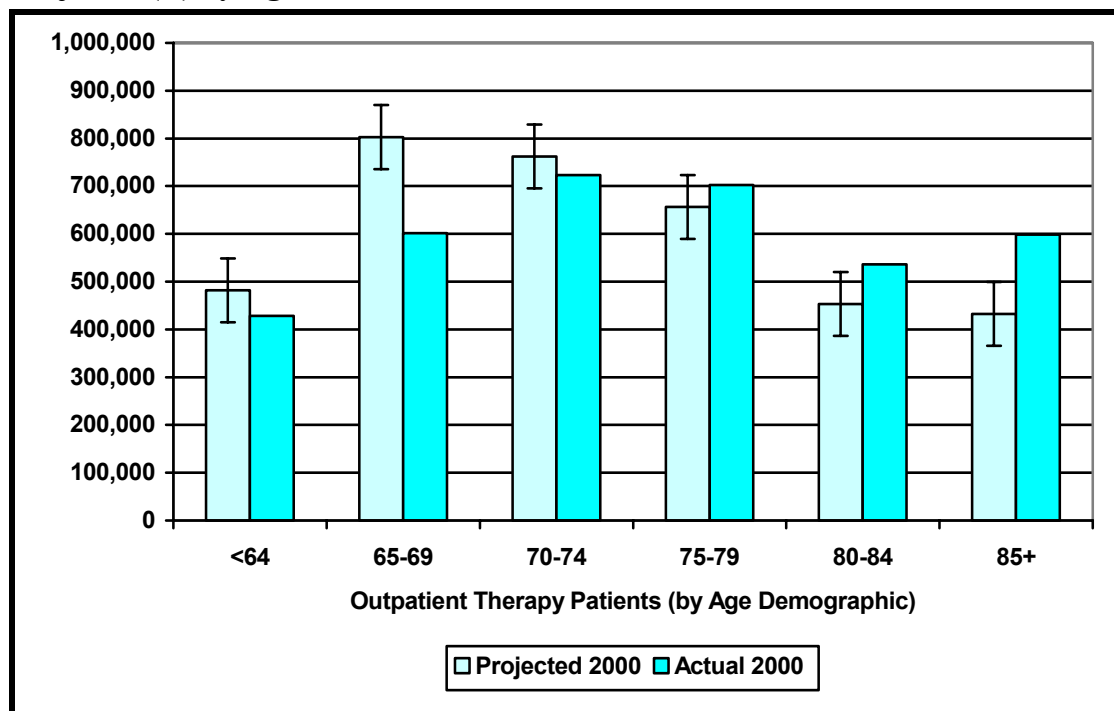
procedure were eliminated from the study. Of those physician and other nonphysician claims retained in the study, only the line items containing “always therapy” procedures were included in the analysis. This same filtering process was used when institutional claims contained therapy procedures on line items other than PT, OT or SLP Revenue Center lines. Only those “always therapy” procedures billed by other departments were included in the study.

The use of the NCH claims defined above resulted in the creation of a universe that should contain all therapy claims in all settings for 1998, 1999 and 2000. The use of the denominator file allowed for a direct comparison of all beneficiaries who received therapy services (numerator) to all Medicare enrollees (denominator). **In contrast to other studies that use an extracted set of data (e.g., the 5% Standard Analytic Files), this study did not need to extrapolate its findings to the complete universe. The complete universe of therapy claims is presumed to be included in this study.**

There is one very significant advantage to using such a known universe in this study, as compared to a study utilizing the Medicare 5 percent Standard Analytic File (SAF). The 5 percent sample is created by selecting claim records for all beneficiaries with 05, 20, 45, 70 or 95 in positions 8 and 9 of their Health Insurance Claim (HIC) number. Each year, it contains about 2 million Medicare beneficiary samples. Since this is a random sample drawn from a very large sampling frame (40 million), the demographic distribution in the SAF is believed to be very similar to the distribution of 100 percent of Medicare beneficiaries. Findings within the 5 percent sample are then projected to the universe of Medicare beneficiaries. When therapy service is the unit of analysis, the 5 percent sample over represents beneficiaries who would not need to use therapy (e.g., younger and healthier beneficiaries), and under represents those who use therapy. This selection bias would be more significant when the deviation is greater between the characteristics of the “average” Medicare population (e.g., age), and the population using therapy services. Such study samples would likely yield lower estimates of therapy utilization and less precise estimates of per-beneficiary costs.

Figure 1 illustrates how the 3.5 million beneficiaries using therapy services in CY 2000 would be estimated by age group, if projected from a sample of the general Medicare population, as compared to the actual universe of therapy users. The figure also illustrates how the population of therapy users differs from the population of all enrollees, with certain smaller age groups utilizing a much greater proportion of therapy services. *(See Section 5.1.2 for a detailed discussion of the characteristics of therapy users compared to the general Medicare population.)*

Figure 1. Standard Error Comparison of Actual (N) Therapy Beneficiaries vs. Projected (N) by Age from Enrollment File – CY 2000



4.3 Constraints of NCH Data

4.3.1 Estimating Therapy Paid Amounts for Noninstitutional claims

Carrier and DMERC claims in the NCH files contain line item charges as well as line item paid amounts. Thus, it is possible to accurately determine the amount Medicare paid for therapy line items on these claims during each of the years of the study. Conversely, for almost the entire period of the three years under study, FI and RHHI claims contained only line item charges, and claim level paid amounts. As a result, it became necessary for this study to extrapolate a paid amount estimate for therapy line items on FI and RHHI claims, because the claim level paid amounts included other line items that were not therapy. Claim level paid amounts were not used, because they would grossly overestimate Medicare payments to institutional providers for therapy services. In addition, methodologies for estimating cost-to-charge ratios used in other studies could not be used here, since the reimbursement for therapy line items was not cost-based in 1999 or 2000.

In order to calculate the institutional line item payments for therapy services, each claim's cumulative total payment was compared to its total charges. The resulting ratio was applied to that individual claim's therapy line item charges. The estimated therapy payments at the line-item level were then aggregated across types of therapy service (e.g. PT, OT) or across provider setting (e.g., Hospital B, SNF B, etc.). Table 8 provides an example of how this ratio was applied to obtain an estimated paid amount for each therapy line item on every institutional claim.

Table 8. Illustration of Estimated Therapy Paid Amounts on an Institutional Claim

| Revenue Center | Procedure | Units | Charge | Paid Amount |
|----------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------|---------------|---------------|
| 0320 (X Ray) | 74230 | 1 | 100.00 | |
| 0420 (PT) | 97116 (Gait Training) | 1 | 25.00 | |
| 0430 (OT) | 97140 (Manual Therapy) | 1 | 30.00 | |
| Claim total | | 3 | 155.00 | 120.00 |
| Estimated Line Paid Amount = $\frac{\text{Line item charge}}{\text{Claim total charge}} \times \text{Claim total payment}$ | | | | |
| PT Estimated Paid Amount | = | $\frac{25}{155} \times 120$ | = | \$19.20 |
| OT Estimated Paid Amount | = | $\frac{30}{155} \times 120$ | = | \$22.80 |
| Therapy Estimated Paid Amount | = | $\frac{55}{155} \times 120$ | = | \$42.00 |

4.3.2 Identifying Beneficiaries Who Would Have Exceeded the Cap in 1999

Neither the universe of claims in this study nor any other study using claims data can accurately report the number of beneficiaries who would have exceeded one or both of the \$1,500 caps, or who did not receive required treatment because of a financial cap. This is due to a number of reasons.

First, claims data sets include information on the beneficiary only at the time he or she generated Medicare claims – and not during any subsequent period, perhaps later in the calendar year. **No data set includes information on beneficiaries who may have received no therapy services at all, but who may have required them.** In the absence of Medicare claims data, the absence of a therapy-related condition cannot be presumed.

Second, CMS' ability to enforce the caps cumulatively across all providers during 1999 was limited due to Y2K issues. At least for most providers, it was the provider's responsibility to track the cap within its own facility. **There is no reliable mechanism to determine from claims data whether the provider discontinued treatment once the cap was reached or approached, or if the provider continued to provide treatment, but ceased to submit bills to Medicare.**

Even if an institutional provider erred and submitted a claim that exceeded one of the caps, the claim may (and should) have been rejected by the FI. The NCH claims files do not include fully rejected or fully denied institutional (FI) claims during the period of this study. Therefore, it is not possible to analyze fully the numbers or characteristics of institutional therapy claims that may have been submitted, but which were fully rejected or denied by the FIs in 1999.

Finally, as stated in an earlier section, accurate tracking of the cap, especially among providers billing to carriers, was dependent upon consistent use of the procedure code modifiers when “always therapy” procedures were billed. **To the extent that procedure code modifiers were not used, any conclusion that a beneficiary did not, or would not have exceeded a particular cap would be subject to error.** In addition, when dollars

were not correctly applied to a particular cap, Medicare claims may have been paid in error, since Medicare had no financial responsibility for services that exceeded one of the \$1,500 limits.

4.3.3 Determination of the Beneficiary's Medical Condition Requiring Therapy Services

There are two primary differences between the carrier and intermediary claims data that impact upon CMS' ability to analyze the utilization of therapy services for different medical conditions. Within the NCH claims files (and the 5% SAF), the carrier claims contain a line item diagnosis. Thus, it is possible to associate a particular diagnosis with a particular procedure. There is no such line-item diagnosis on FI claims, only claim-level diagnoses.

The FI claims include a primary diagnosis, and up to eight additional diagnoses. However, the primary diagnosis may not be associated directly with the therapy services, if the claim includes other types of services. There is no requirement that the FI claim include any secondary diagnosis. Carrier claims include a maximum of four diagnoses per claim, compared to the maximum of nine on the FI claims.

These data constraints related to diagnosis pose serious challenges for CMS to fully and accurately reflect the medical conditions for which therapy is given. They also limit the ability to report other related conditions that may impact upon the duration or amount of treatment given. Finally, they impact on CMS' ability to consider or make recommendations for an alternative payment system for outpatient therapy services that is based upon the beneficiary's condition.

5.0 RESULTS

5.1 Utilization Analysis by Individual Beneficiaries

5.1.1 The Universe of Medicare Enrollees (The Denominator)

This study utilized the Denominator file to identify the number of beneficiaries who were enrolled in the Medicare program with any combination of Part A hospital insurance (HI) and/or Part B supplementary medical insurance (SMI). This would permit comparison with other studies that analyzed individual beneficiary rates of utilization for both Part A and Part B services.

The number of Medicare enrollees increased during the period under study, especially in the under 65 and the 80 and over age groups. From CY 1998 to CY 2000, the number of Medicare beneficiaries increased from 40.7 million to 41.6 million, an increase of 2.2 percent (*see Table 9*). Of these enrollees, the only age group with declining enrollment was aged 70-74 (-1.4%). Age groups that demonstrated notable increases in enrollment were those 64 and under (+6.7%), 85 and above (+4.4%) and 80-84 (+3.7%) (*see Appendix A-2*). These data indicate an overall increase in the number of Medicare disability beneficiaries and an aging population.

Table 9. Number of Medicare Enrollees

| Medicare Enrollees (HI & SMI) | Medicare Enrollees | | | % Change | | |
|----------------------------------|--------------------|------------|------------|----------|-------|-------|
| | 1998 | 1999 | 2000 | 98-99 | 99-00 | 98-00 |
| Annual Total | 40,703,112 | 41,095,965 | 41,587,217 | 1.0% | 1.2% | 2.2% |

Changes in enrollment by race over the three-year period under study are difficult to identify, due to apparent improvements in the Denominator file in identifying the beneficiary's race. The number of 'Unknown' beneficiaries by race declined by 48.3 percent and the percentage of beneficiaries identified as 'Other' race decreased by 38 percent (*see Appendix A-3*).

There were minimal changes in enrollment by gender across the three years, however the number of male enrollees increased by 2.7 percent, while female enrollees increased by 1.8 percent (*see Appendix A-4*).

5.1.2 Unique Patients Receiving Part B Therapy Services (the Numerator)

The overall number of patients receiving Medicare Part B therapy decreased from CY 1998 to CY 1999, and then increased in CY 2000. In 1998, there were 3.5 million Medicare beneficiaries receiving therapy services. This number declined to 3.4 million in 1999 and then increased to 3.6 million in 2000 (*see Table 10*). The increase in CY 2000 is consistent with the overall Medicare enrollment pattern (*see section 5.1.1*). However, the 2.5 percent decrease in the number of outpatient therapy patients in CY 1999 was inconsistent with the 1.0 percent increase in Medicare enrollment during that year.

Table 10. Number of Medicare Part B Therapy Patients

| Part B Therapy Patients | 1998 | 1999 | 2000 | % Change | | |
|-------------------------|-----------|-----------|-----------|----------|-------|-------|
| | | | | 98-99 | 99-00 | 98-00 |
| Annual Total | 3,511,793 | 3,424,309 | 3,589,865 | -2.5% | 4.8% | 2.2% |

The year-to-year changes in the number of outpatient therapy patients varied by patient demographics. In CY 1999, the greatest declines occurred for those individuals aged 80-84 and those over 85 (*see Appendix D-1.2*), as well as North American Natives and African Americans (*see Appendix E-1.2*). Females had a slightly greater decline in CY 1999 than males (*see Appendix F-1.2*). In CY 2000, there was a rebound in the number of outpatient therapy patients across all demographic groups. However, there remained a net decline in the number of therapy patients from CY 1998-2000 for those aged 85 and above (-2.0%) and North American Natives (-7.0%).

The age and gender distributions of outpatient therapy patients differ from the universe of Medicare beneficiaries, with higher therapy utilization rates among older populations and women. As introduced at the end of Section 4.2, there are distinct differences in key characteristics when comparing the general Medicare population to the population of Medicare therapy users. Figures 2-4 provide statistical estimates within a five percent standard error of the outpatient therapy population that would be obtained if projected from a sample of all Medicare beneficiaries. In other words, the figures also show what the population of therapy users would be if there were not age, gender or racial differences between therapy users and the general Medicare population. These figures compare the demographic characteristics of all beneficiaries in the CY 2000 Denominator file to the demographics of those beneficiaries who received therapy services during that year. The relative volume of observed patients in age groups 80-84 and those over 85 is significantly higher than that projected from the general Medicare population. Conversely, the volume of observed 65-69 year old patients is significantly lower than the overall Medicare population projection (*see Figure 2*). Therefore, older Medicare beneficiaries are more likely to utilize Part B therapy services. The volume of patients by race demographic is consistent with that observed in the general population (*see Figure 3*). Finally, the number of females receiving outpatient therapy is significantly higher, and the number of males is lower than would be expected from the general Medicare population (*see Figure 4*).

Figure 2. Volume of Outpatient Therapy Patients Projected from the Denominator Compared to the Actual Therapy Population by Age

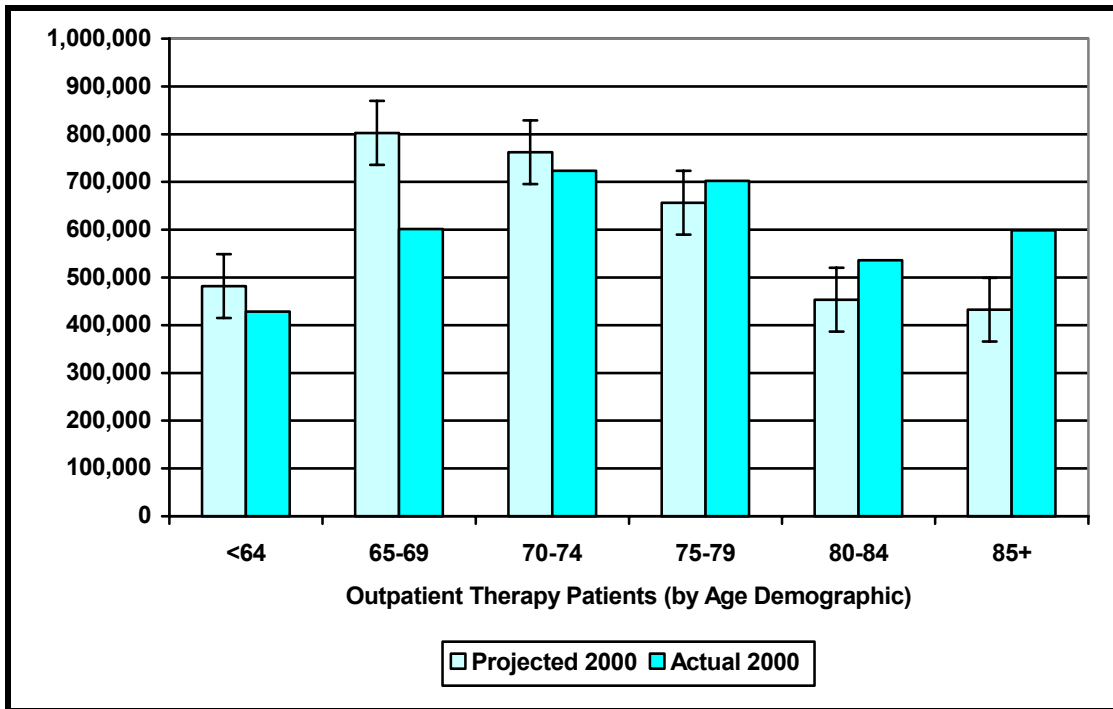


Figure 3. Volume of Outpatient Therapy Patients Projected from the Denominator Compared to the Actual Therapy Population by Race

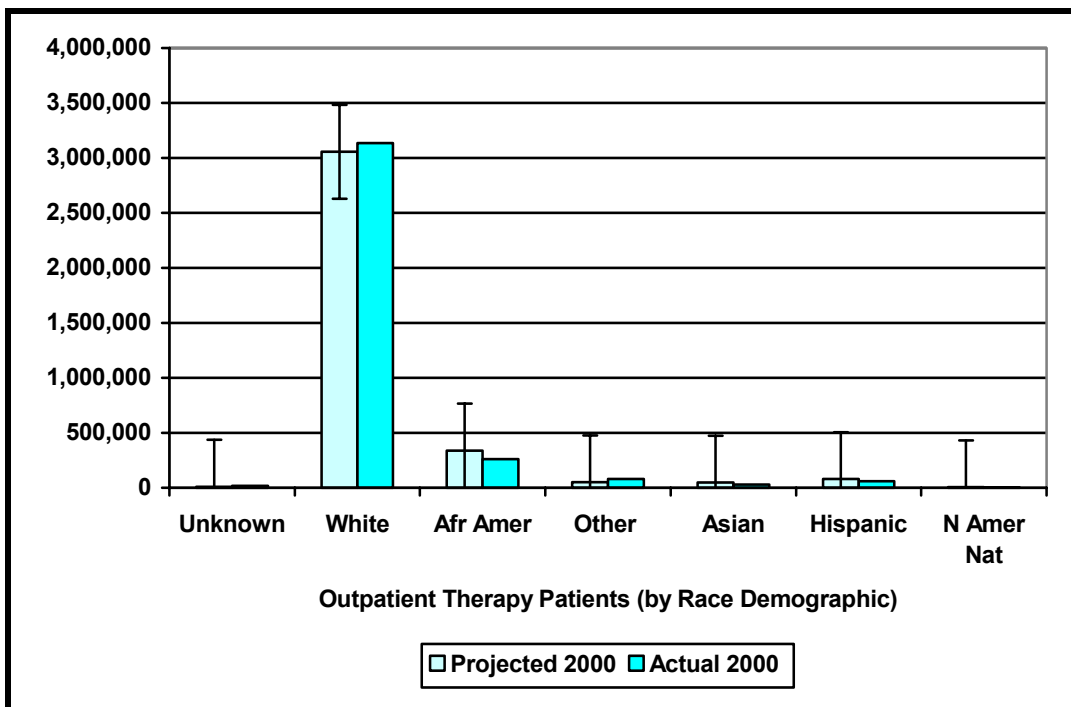
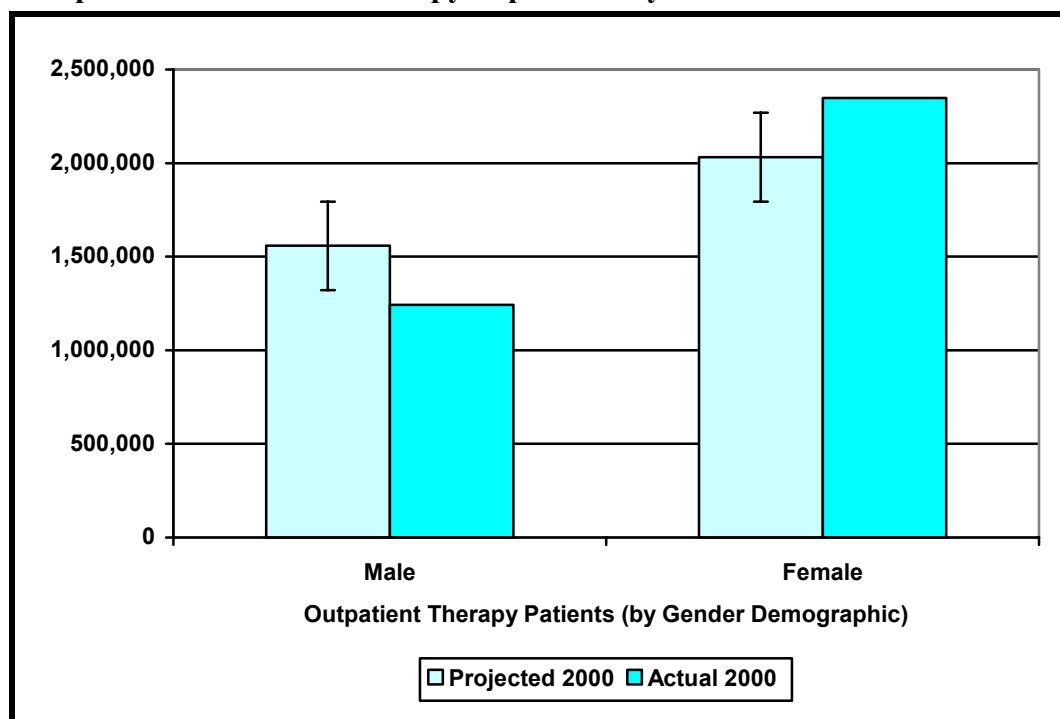


Figure 4. Volume of Outpatient Therapy Patients Projected from the Denominator Compared to the Actual Therapy Population by Gender



5.1.3 Percent of Enrollees Receiving Outpatient Therapy (Numerator/Denominator)

It is important to compare the change in the number of enrollees who used therapy services to the change in the total number of Medicare enrollees, because growth in the number of therapy patients could be expected if the population of enrollees increased. Such a change in utilization would be independent of any policy changes or service delivery changes by providers. Thus the comparison of the number of therapy patients (the numerator) to the number of Medicare enrollees (the denominator) is necessary to analyze the impact of policy changes in CY 1999 and CY 2000 on the utilization of Medicare therapy services.

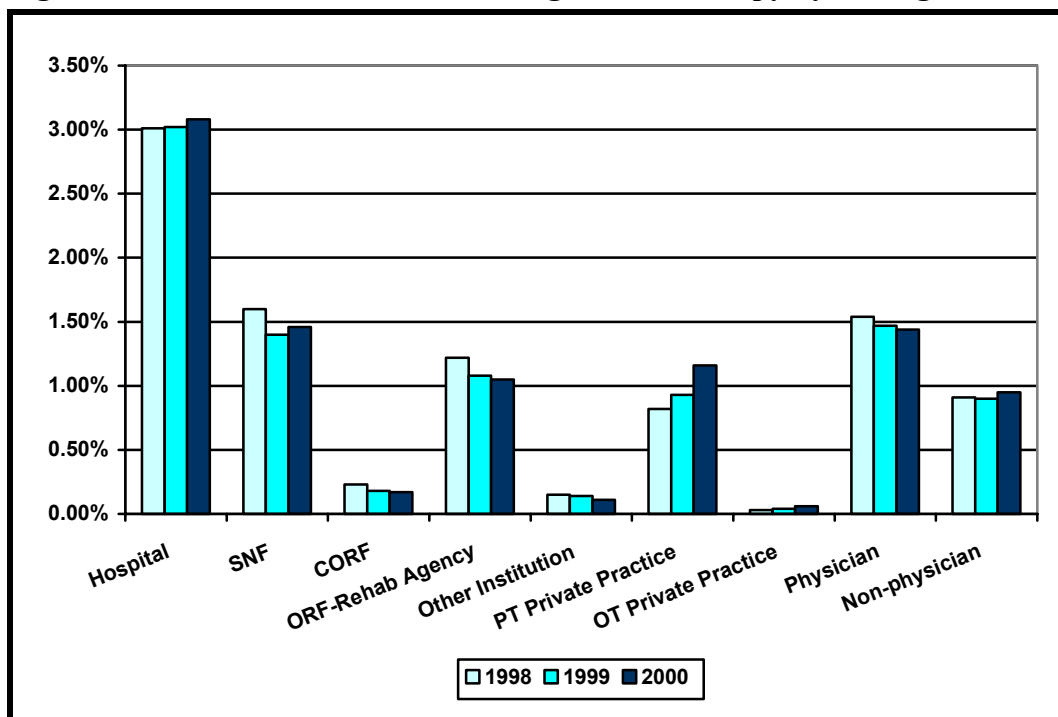
The percent of Medicare enrollees receiving outpatient therapy services is not a large segment of the overall Medicare population and it demonstrated a slight drop in CY 1999. Table 11 identifies that while 8.6 percent of beneficiaries received Part B therapy services in both CY 1998 and CY 2000, there was a decline in CY 1999 to 8.3 percent. This is equivalent to a net 3.4 percent decline in the ratio of therapy patients to the Medicare population in CY 1999.

Table 11. Annual Percent of Medicare Enrollees Receiving Part B Therapy

| Part B Therapy Patients / Medicare Enrollees | Percent of Enrollees | | | % Change | | |
|----------------------------------------------|----------------------|------|------|----------|-------|-------|
| | 1998 | 1999 | 2000 | 98-99 | 99-00 | 98-00 |
| Annual Percent | 8.6% | 8.3% | 8.6% | -3.4% | 3.6% | 0.0% |

Figure 5 illustrates the percent of the Medicare population that received outpatient therapy services furnished in the practice settings included in this study. It is clear that while the percent of enrollees receiving therapy is not large overall, there are differences between practice settings. Additionally, across the three years under study, the within-setting differences could be related to payment policy changes that occurred during this time.

Figure 5. Percent of Enrollees Receiving Part B Therapy by Setting



Hospitals were the only institutional provider setting that was not subject to the caps in CY 1999, and they realized a modest increase of 0.5 percent in the percent of enrolled beneficiaries receiving therapy that year. This trend continued in CY 2000. Other institutional settings were subject to the caps in CY 1999, and all reflected significant declines in the percent of enrollees receiving therapy. The changes were: SNF (-12.5%), CORF (-22.5%), ORF (-12.0%), and Other Institutions (-5.0%). In 2000, CORF, ORF and Other Institutions continued to demonstrate declines in this ratio despite the moratorium on the therapy caps (*see Appendices C-1.3 and C-2.3*), indicating that factors in addition to the caps may have influenced these changes.

Among noninstitutional providers, physical and occupational therapists in private practice saw their annual caps increased from \$900 in 1998 to \$1,500 in 1999. These providers demonstrated 13.8 percent (PTPP) and 51.7 percent (OTPP) increases in their ratio of patients to Medicare enrollees in 1999. This trend continued in CY 2000 when the moratorium on the enforcement of the caps occurred. Physician practices were subject to the caps for the first time in CY 1999, and these saw 4.3 percent fewer beneficiaries in CY 1999. That trend continued in CY 2000, despite suspension of the caps. Other nonphysician practitioners that were permitted to furnish therapy services had a modest

decline in the percent of beneficiaries treated in CY 1999, but this rebounded in CY 2000 (see *Appendices C-1.3 and C-2.3*).

In summary, from CY 1998-1999, there was a dramatic shift in the settings in which beneficiaries received outpatient therapy services. These shifts were consistent with payment policy changes that affected those settings. Settings such as SNF, CORF, ORF, other institutions, physician, and nonphysician settings that were subject to therapy caps in CY 1999 treated a smaller percentage of enrollees in CY 1999. Hospitals (not subject to the caps) and PTs and OTs in private practice (realizing a \$600 increase in caps) treated an increased percent of enrollees in CY 1999. Despite the suspension of the caps in CY 2000, the overall patterns remained, indicating a longer lasting shift in the delivery of outpatient therapy services away from most institutional settings toward hospital and therapist private practice settings.

Across the three years under study, the percent of enrollees receiving outpatient therapy steadily increases with increased age for those over 65. Declines in CY 1999 were noted in all age groups, however, they were most dramatic for the over-85 age group, and this group did not recover to 1998 levels in 2000. Figure 6 shows the year-to-year changes in each age group. It is notable that in CY 1999, the year of the caps, nearly all age groups demonstrated a decline in the percent of enrollees receiving outpatient therapy. However, while the average decline was 3.4 percent in CY 1999, 10.2 percent fewer enrollees over age 85 received outpatient therapy. In CY 2000, all age groups demonstrated some recovery. However, the number of enrollees aged 85 and over receiving outpatient therapy in CY 2000 remained 6.1 percent lower than CY 1998. (see *Appendix D-1.3*). The decreases in the oldest age group directly reflect changes in the service delivery patterns of institutional providers. Most notably, while the percent of enrollees aged 85 and above receiving therapy in institutions declined by 9.7 percent from CY 1998-2000 (see *Appendix D-2.3*), the percentage actually increased in noninstitutional settings (see *Appendix D-3.3*).

Due to the significant changes observed in the race demographic denominator file described in section 5.1.1, the significance of observed changes in the percentage of enrolled beneficiaries receiving outpatient therapy services by race is less certain. Figure 7 highlights the year-to-year changes to this ratio based upon patient racial group demographics. The observed changes stratified by individual race across the three years under study are located in *Appendices E-1.3, E-2.3, and E-3.3* of this report.

The percent of enrollees receiving outpatient therapy services by gender demonstrated similar patterns in CY 1998-1999 and CY 1999-2000. Figure 8 highlights that both males and females demonstrated a reduction in the percent of beneficiaries receiving therapy in CY 1999, with a recovery in CY 2000. Fewer patients treated by institutions drove the decline in 1999, and the recovery in 2000 was driven primarily by increases in noninstitutional providers (see *Appendices F-1.3, F-2.3 and F-3.3*).

Figure 6. Percent of Enrollees Receiving Part B Therapy by Age

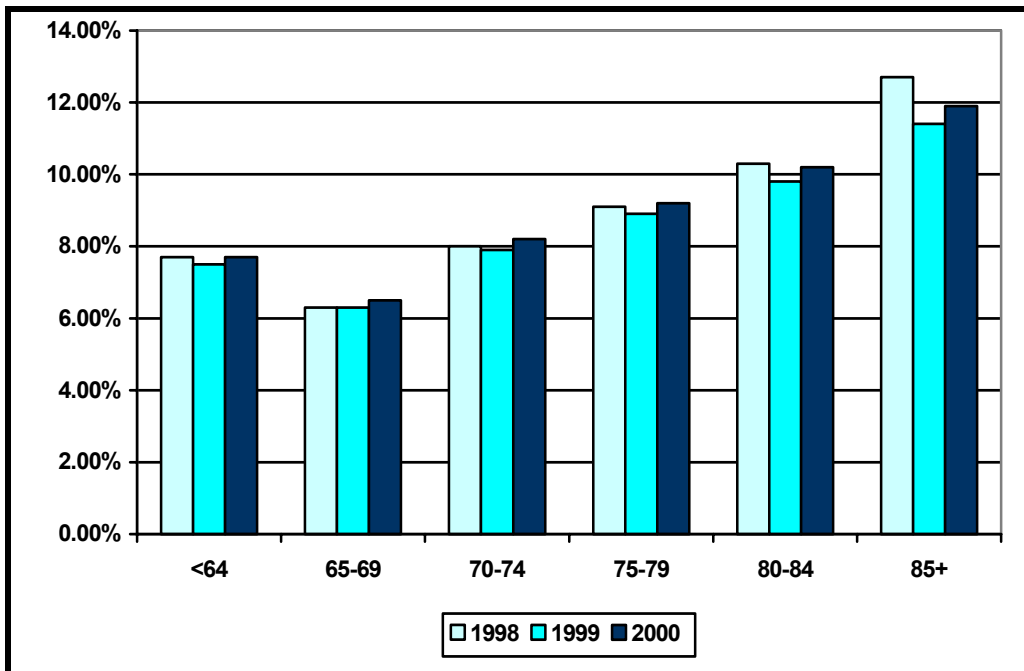


Figure 7. Percent of Enrollees Receiving Part B Therapy by Race

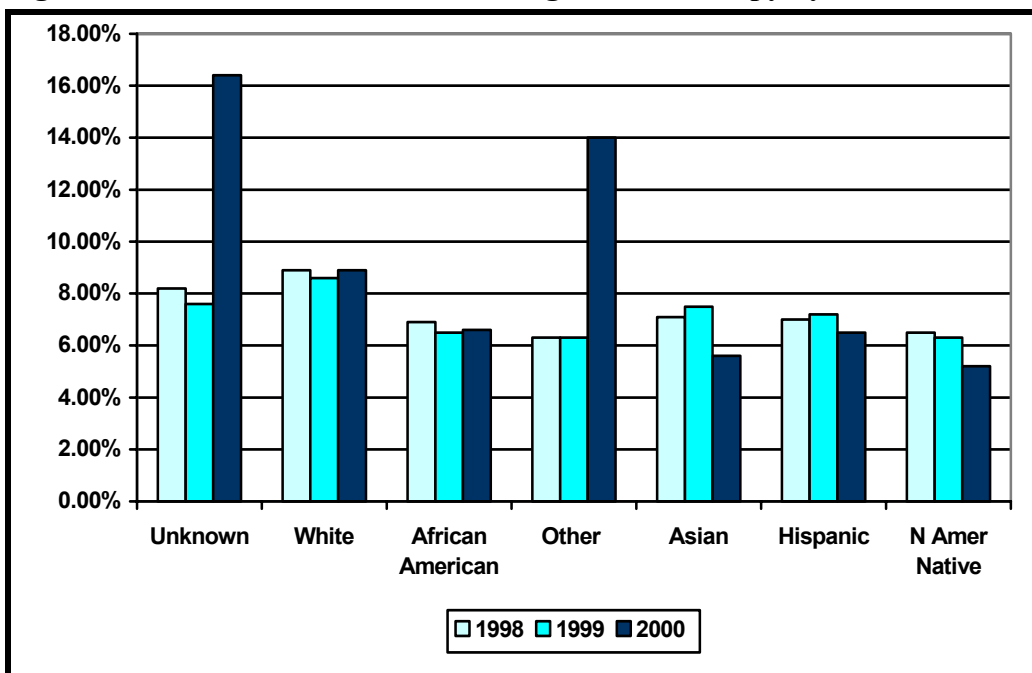
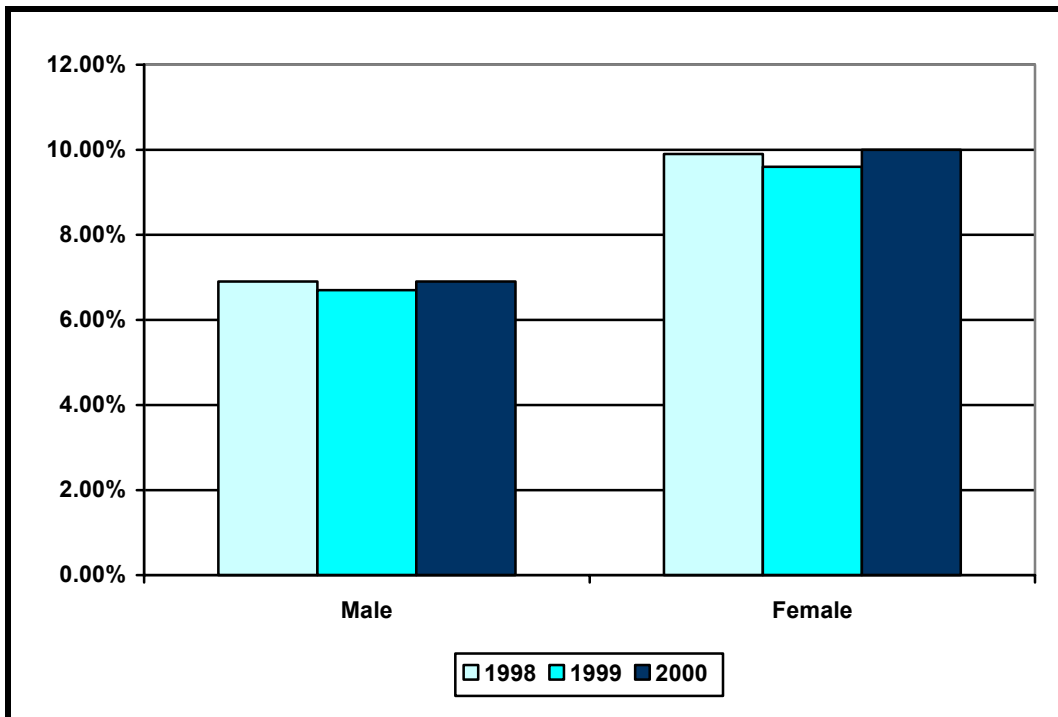


Figure 8. Percent of Enrollees Receiving Part B Therapy by Gender



5.1.4 Average Per-Patient Payments

Across the three years under study, higher per-patient payments for outpatient therapy services were found in institutional provider settings such as SNF, CORF and ORF. Older patients, minorities and females also had consistently higher per-patient payments from CY 1998-2000. As Table 12 summarizes, the overall average per-patient payments decreased by 32.2 percent in CY 1999, and despite some rebound in CY 2000, these remained 12.2% lower than CY 1998 levels.

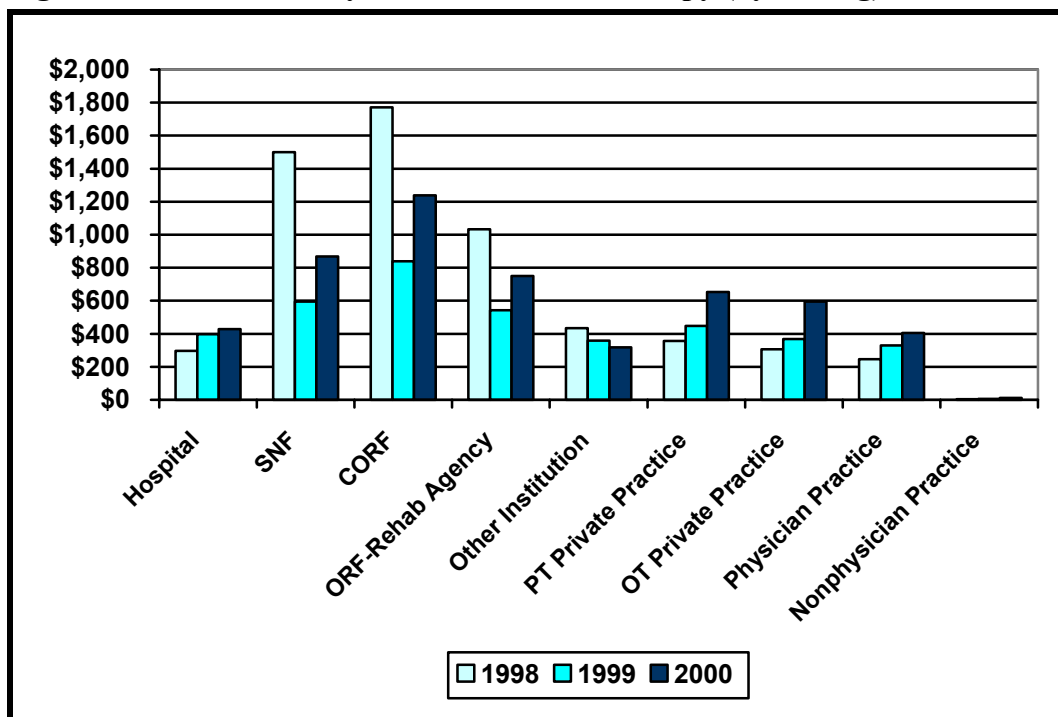
Table 12. Average Annual Per-Patient Part B Therapy Payments

| Per-Patient Payments | Therapy Payments Per-Patient | | | % Change | | |
|----------------------|------------------------------|-------|-------|----------|-------|--------|
| | 1998 | 1999 | 2000 | 98-99 | 99-00 | 98-00 |
| Annual Average | \$662 | \$449 | \$581 | -32.2% | 29.5% | -12.2% |

Figure 9 highlights the changes in average annual per-patient payments that occurred from CY 1998-2000 within the practice settings under study. Several interesting trends appear to be correlated with policy changes during the same period. First, the **per-patient payments declined dramatically in CY 1999 in institutional settings that were impacted by both the implementation of the fee schedule and the imposition of the therapy caps.** From CY 1998-1999, per-patient payment declines were as follows: SNF (-60.4%); CORF (-52.6%); ORF (-47.4%); and Other Institutions (-17.6%). **Despite a modest rebound in CY 2000 when the moratorium on the enforcement of the caps was instituted, the per-patient payments for these four institutional settings remained**

depressed by 27-42 percent compared to CY 1998 levels. This clearly indicates the significant independent effect that resulted from replacing institutions' cost-based payments of CY 1998 with the fee schedule in CY 1999. Even without the caps in CY 2000, the average per-patient payments remain significantly lower (see Appendices C-1.5 and C-2.5).

Figure 9. Per-Patient Payments for Part B Therapy (by Setting)



Hospitals were another institutional setting that transitioned from cost-based reimbursement for outpatient therapy services to the fee schedule in CY 1999. However, they were the only setting that was exempt from the therapy caps in CY 1999. As Figure 9 demonstrates, **in contrast to the other institutions, hospital per-patient payments rose by 33.7 percent in CY 1999** (see Appendices C-1.5 and C-2.5). This increased intensity of services may be the result of a possible increase in the complexity of outpatients previously treated by SNFs, CORFs or ORFs. **The continued growth in hospital per-patient averages in CY 2000 primarily reflects an increase in the value of the fee schedule** (see Appendix N). Also of note is that the per-patient payment average for hospitals has been and remains significantly lower than SNFs, CORFs, and ORFs, which may be indicative of an ongoing difference in the type of patients/conditions that are treated in this setting (see Appendices C-1.5 and C-2.5).

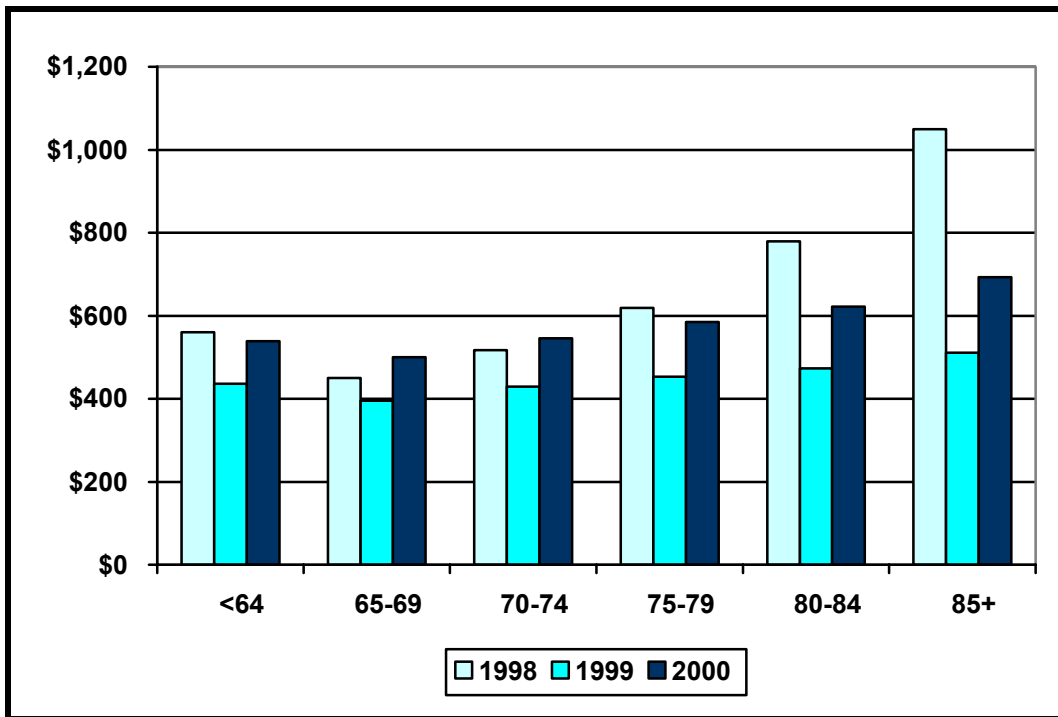
Other interesting patterns found in noninstitutional provider settings also can be related to payment policy changes. **Noninstitutional providers have been subject to the fee schedule since 1992, and therefore, across the three years under study, these settings benefited from annual increases to the fee schedule.** This contributed to the observed increases in per-patient payments to PTs and OTs in private practice, physicians, and

nonphysician practitioners, which ranged from 20.8-48.3 percent in CY 1999. These again increased by 23.1-111.1 percent from CY 1999 to CY 2000, as shown in Figure 9. **Similar to hospitals, the per-patient average payment has been historically low for noninstitutional providers, due in part to differences in the patient populations/conditions treated, and to the previously existing \$900 annual caps on PT and OT private practitioners.** With increases in both the fee schedule and the caps for PTPPs and OTPPs in 1999, and with the suspension of the caps in 2000, it is conceivable that these noninstitutional practitioners increased their volume of more complex patients/conditions, due to the relief from prior financial constraints, which may have limited their ability to accept such patients for treatment (*see Appendices C-1.5 and C-3.5*).

Not surprisingly, when demographic characteristics such as age, race and gender are considered, the per-beneficiary therapy caps and the fee schedule implementation by institutions had the greatest impact on patients with higher expected costs. Figures 10-12 provide graphic representation of the changes in per-patient average annual outpatient therapy payments across the three years under study.

Examination of the per-patient average annual payments by age demonstrates a notable and steady increase in average payments as patients age beyond 65 years (*see Figure 10*). This relationship is consistent across the three years under study, and could indicate unique differences in outpatient therapy needs of beneficiaries as they age. During CY 1999, when the fee schedule was applied to institutional providers and the caps were imposed upon all settings except hospitals, there were marked decreases in per-patient payments in all age groups. The most significant declines were for those patients over the age of 85 (-51.3%), and those aged 80-84 (-42.2%). These declines were principally due to reduced institutional provider per-patient payments. Although there was a rebound in per-patient payments in CY 2000, the per-patient payments for patients aged over-85 and from 80-84 remained 34.0 percent and 20.2 percent respectively lower than CY 1998 levels. **Again, this effect on the average per-patient payment for older beneficiaries is a direct result of decreased institutional provider payments** (*see Appendices D-1.5, D-2.5, D-3.5*).

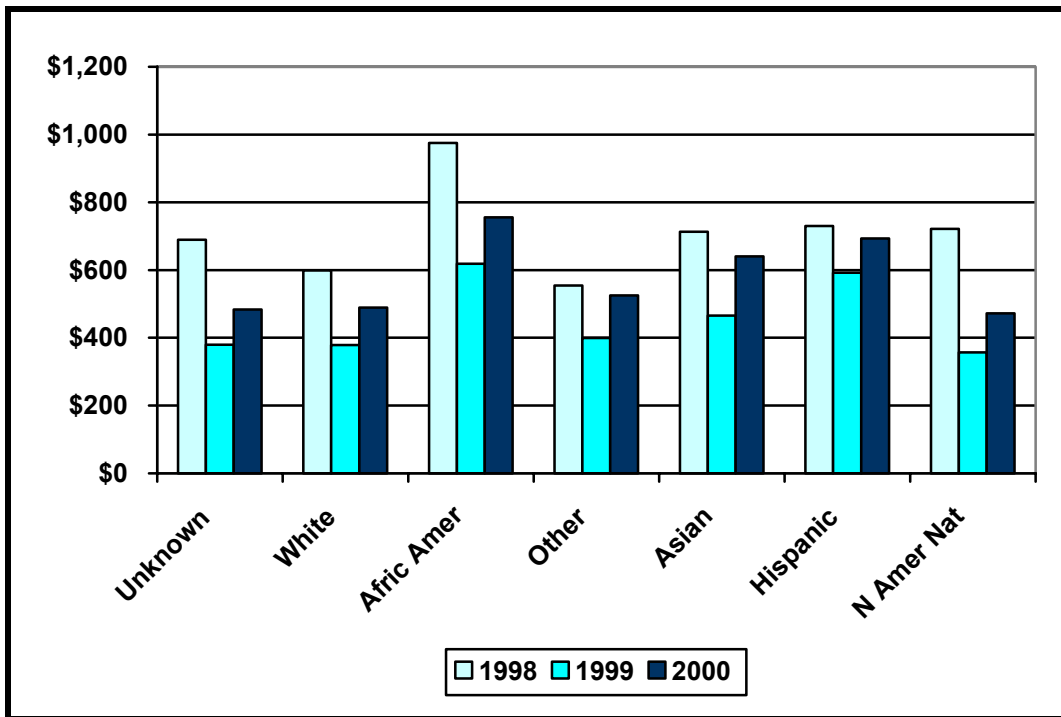
Figure 10. Average Annual Per-Patient Payments for Part B Therapy by Age



There was a consistent pattern of differences in per-patient costs across different racial groups (see Figure 11). With the exception of North American Natives, the relative per-patient costs between all race groups remained consistent across the three years under study. From CY 1998 to CY 1999, all race groups had marked reductions in average per-patient annual payments, with greater declines occurring in the higher cost groups. In CY 2000, the partial-rebound effect also occurred in all race groups but their relative cost relationship to each other remained. Unlike the age-related changes discussed above, the declines in per-patient payments could not be attributed solely to decreases in institutional provider payments. In CY 1999, noninstitutional providers also demonstrated a decline in per-patient payments for beneficiaries of Asian descent (-21.3%). The marked declines in annual per-patient payments for North American Native patients did not follow the pattern of the other race groups, and is most likely attributed to the extremely low volume of patients from this racial group, as there were fewer than four thousand such patients observed (see Appendices E-1.5, E-2.5, E-3.5).

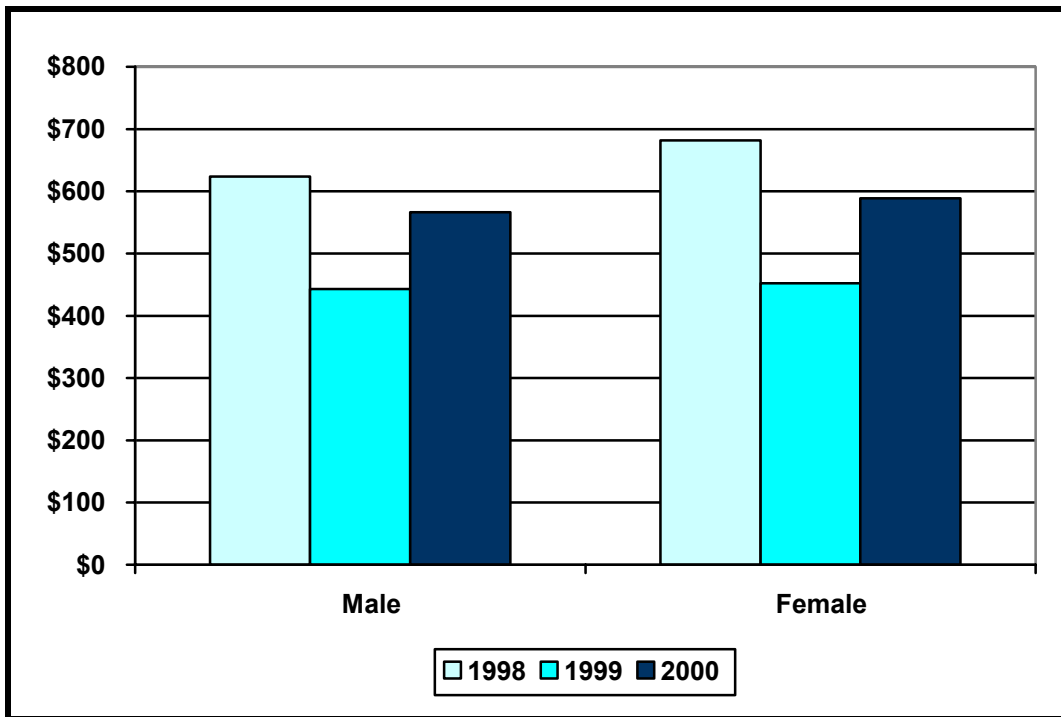
One possible explanation for differences in treatment costs between race groups could be that there are underlying health status differences in these groups that created an unequal need for outpatient therapy services. The disparity in health status among different racial groups has been well documented. It is beyond the scope of this report to determine if the higher costs are associated with health status differences, an absence of or delay in receiving preventive or early medical care, or other causes.

Figure 11. Average Annual Per-Patient Payments for Part B Therapy by Race



There was a consistent pattern of differences in per-patient costs linked to the beneficiary's gender (see Figure 12). Across the three years of study, women generated a slightly higher annual per-patient average payment than men. In CY 1998, females averaged \$682 per-patient while males averaged \$624. This amount declined 32.2 percent in CY 1999 and partially rebounded in CY 2000 to \$589 for females and \$566 for males. The average annual per-patient decrease in payments persisted across gender line was driven by reduced institutional provider payments (see Appendices F-1.5, F-2.5, F-3.5).

Figure 12. Average Annual Per-Patient Payments for Part B Therapy by Gender



In summary, there was a marked reduction in per-patient payments in CY 1999 when the fee schedule was introduced to institutional providers, and the \$1,500 caps were imposed upon all providers except hospitals. **The per-patient average reductions were principally driven by reduced payments to SNFs, CORFs, ORFs and Other Institutions. As a result, beneficiaries who traditionally used more institutional care, namely those 80 and above and racial minorities, saw the greatest decline in average per-patient payments.**

5.2 Utilization by Type of Outpatient Therapy Service

5.2.1 Analysis by Type of Therapy Plan of Care

One intention of this study was to describe the patterns of utilization of Part B therapy services in a manner that was consistent with CMS published regulations governing the implementation of the annual \$1,500 per-patient therapy caps. The formal instructions for the implementation of the outpatient therapy caps in 1999 were published in the Federal Register on November 2, 1998 (pp. 58814-59190).

Effective January 1, 1999, all claim lines for outpatient therapy services furnished by qualified therapists or under a therapy plan of care were required to contain either a GP (physical therapy), GN (speech-language pathology), or GO (occupational therapy) modifier for analytical purposes. Providers could also use this information for tracking the caps. Further clarification indicated that all HCPCS procedures published in Addendum D of the June 5, 1998 Federal Register were deemed as outpatient therapy services always

subject to the therapy caps. Carriers were to return claims to providers (including physicians and nonphysician practitioners) for “always therapy” procedures that did not have a corresponding therapy modifier.

The presence of the modifiers would have permitted providers, payment contractors, and researchers to track and study the annual per-beneficiary caps. Use of the modifiers also should have been effective in preventing Medicare overpayments (beyond the cap amounts) in CY 1999, and in accurately identifying the numbers of beneficiaries who neared or exceeded the cap amounts.

However, this study identified that there was extremely poor compliance with use of the modifiers by noninstitutional providers in CY 1999. This pattern continued in CY 2000. Figures 13 and 14 highlight the percentage of modifier use on outpatient therapy claim lines in CY 1999 for institutional providers (1.2 % non-compliance) versus noninstitutional providers (87.7% non-compliance). **The dollar impact of non-compliance by noninstitutional providers was \$323.5 million in Medicare payments in CY 1999 that should have been attributed to one of the caps, but which could not be through the use of a modifier. Noninstitutional provider payments for “always therapy” procedure codes with no modifiers increased to \$476.8 million in CY 2000.** These figures represent 21 percent of Medicare outpatient therapy payments in CY 1999 and 23 percent of payments in CY 2000. Appendix R contains more detailed analysis of the frequency of therapy modifier use across the three years under study and the financial impact of provider noncompliance.

The implication of these data limitations is that no study is able to use the GP, GN, and GO outpatient therapy modifiers as a way to accurately estimate the dollars that should have been attributed to a particular cap, or to accurately identify the numbers of beneficiaries who neared or exceeded a particular cap. Noncompliance with the use of the modifiers also limits any study’s ability to identify service patterns by therapy plan of care type.

Figure 13. CY 1999 Frequency of Therapy Modifier Use - Institutional Settings

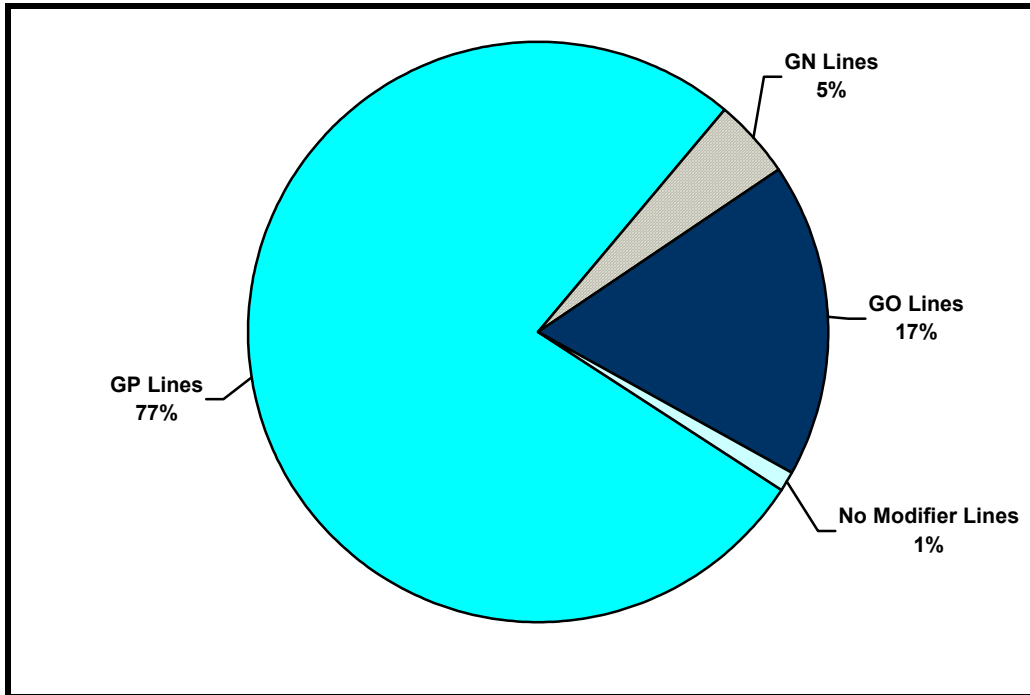
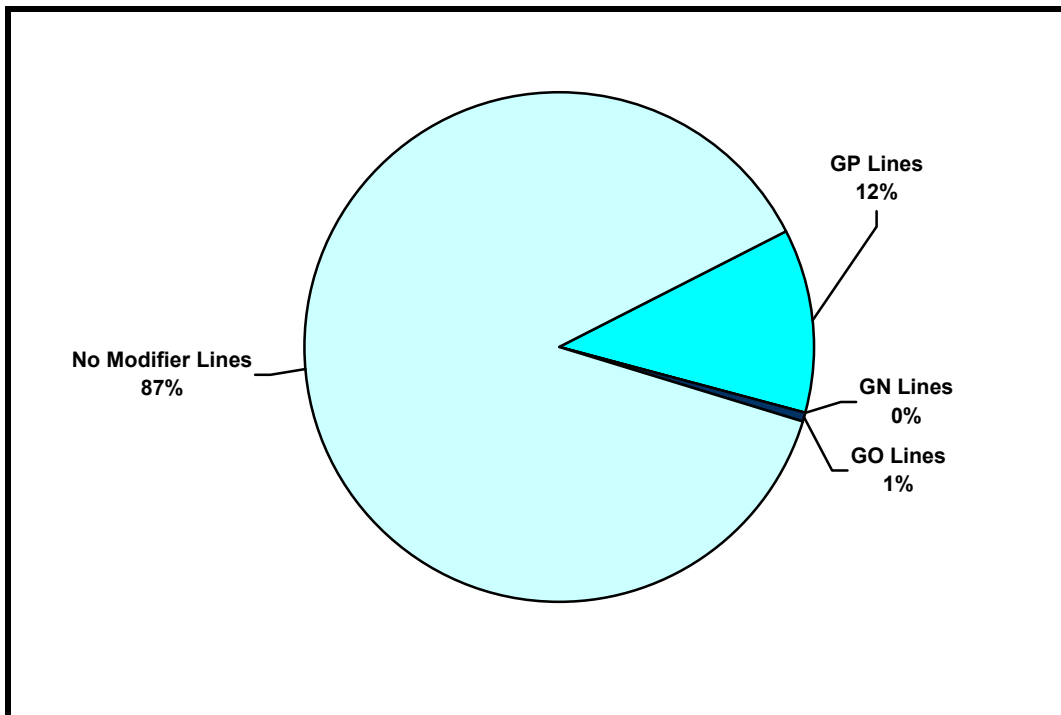


Figure 14. CY 1999 Frequency of Therapy Modifier Use - Noninstitutional Settings



5.2.2 Analysis by Therapy Service Provider Specialty Type

In order to overcome the limitations associated with identifying the therapy plan of care type, as described in section 5.2.1, this study adopted a strategy of operationally defining and reporting therapy services using claims data that identified the specialty of the billing provider. This is the same strategy approved by CMS for a related outpatient therapy medical review study concurrently being performed by this contractor.

Briefly, both studies considered any services furnished by a therapist, either one employed by an institution, or one billing claims as a private practitioner, to be therapy services of the therapist's respective specialty type. In institutional provider settings, any services furnished by physical therapists would be billed under the 042x revenue center code. Speech-language pathologist and occupational therapist services would be billed under the 044x and 043x revenue centers respectively. 'Always therapy' HCPCS billed on an institutional claim in any other revenue center (such as respiratory therapy) were considered 'Other' therapy by the study. For noninstitutional providers, claims containing only a PTPP provider number were considered PT services, and claims containing only an OTPP provider number were classified as OT services. 'Always therapy' HCPCS billed on claims containing at least one physician and/or other nonphysician practitioner provider number were considered 'incident-to' services per CMS' definition, and these were reported as "Other Therapy" in this report.

This methodology provided more precision in reporting the specialty of the person rendering the outpatient therapy services than the use of the procedure code modifiers, particularly when describing utilization patterns by practice setting. However, there remained limitations that prevented this study from fully describing therapy utilization in relation to the therapy caps of CY 1999. As can be seen in Table 13 and Figures 15-17, even with the increased precision of this methodology in identifying the specific type of therapy furnished on outpatient therapy claims, a significant number of paid dollars could not be attributed to a particular therapy type. From CY 1998 to CY 2000, annual payments to non-therapist specialty providers increased from 7 percent of all therapy payments to 12 percent. This correlates to increased payments from \$158.9 million in CY 1998 to \$250.7 million in CY 2000, a two-year payment increase of 57.8 percent (*see Appendix Q*).

Table 13. Outpatient Therapy Payments by Specialty - Overall

| | 1998 | 1999 | 2000 | % Change 98-99 | % Change 99-00 | % Change 98-00 |
|-------|-----------------|-----------------|-----------------|-------------------|-------------------|-------------------|
| PT | \$1,355,595,552 | \$985,183,680 | \$1,387,616,139 | -27.3% | 40.8% | 2.4% |
| SLP | \$273,910,140 | \$97,357,600 | \$123,090,301 | -64.5% | 26.4% | -55.1% |
| OT | \$537,677,784 | \$251,209,548 | \$325,907,812 | -53.3% | 29.7% | -39.4% |
| Other | \$158,862,206 | \$204,285,988 | \$250,686,825 | 28.6% | 22.7% | 57.8% |
| Total | \$2,326,047,680 | \$1,538,038,815 | \$2,087,303,077 | -33.9% | 35.7% | -10.3% |

Figure 15. CY 1998 Outpatient Therapy Payments by Specialty

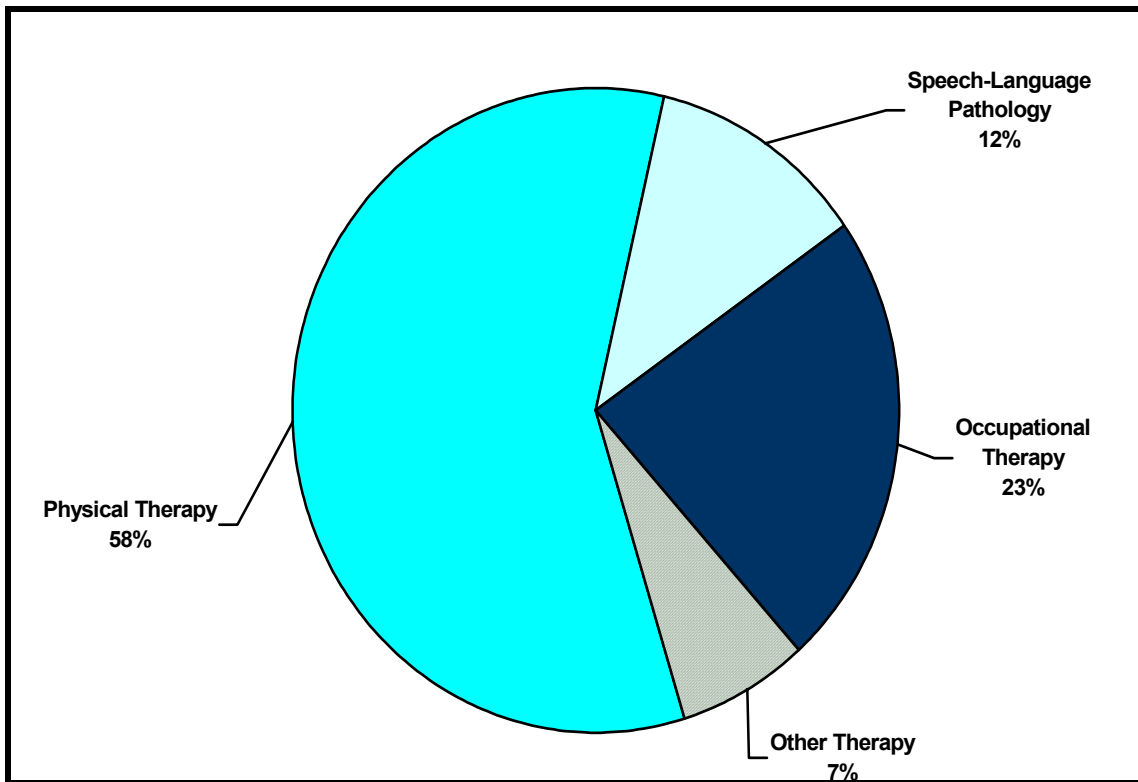


Figure 16. CY 1999 Outpatient Therapy Payments by Specialty

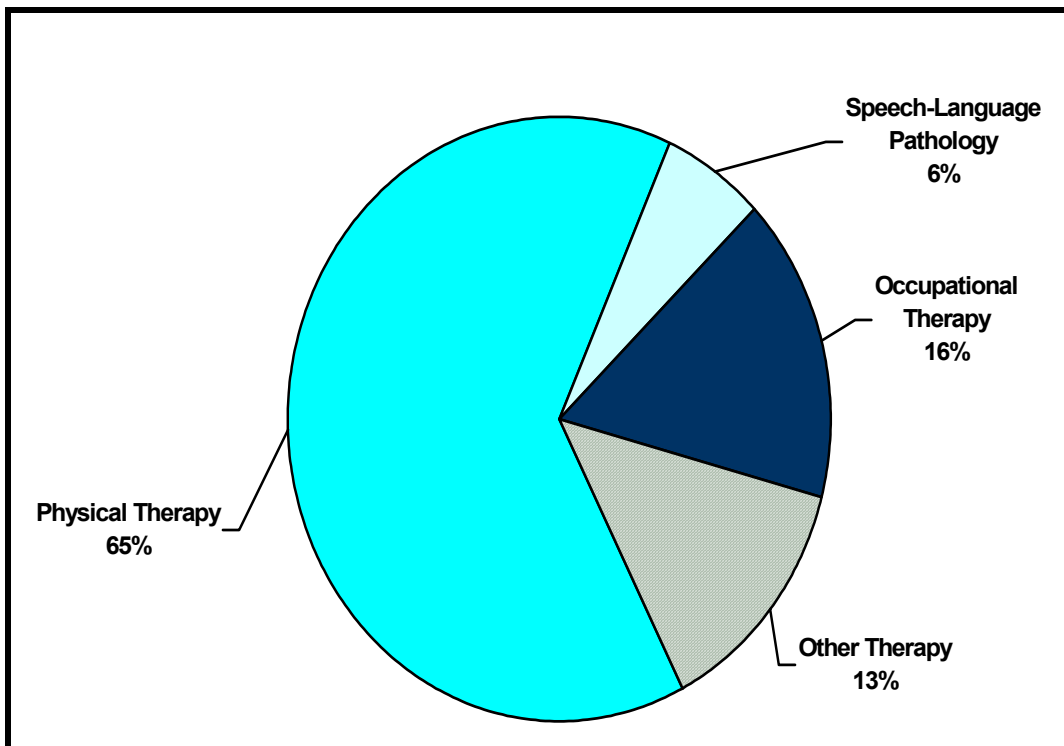
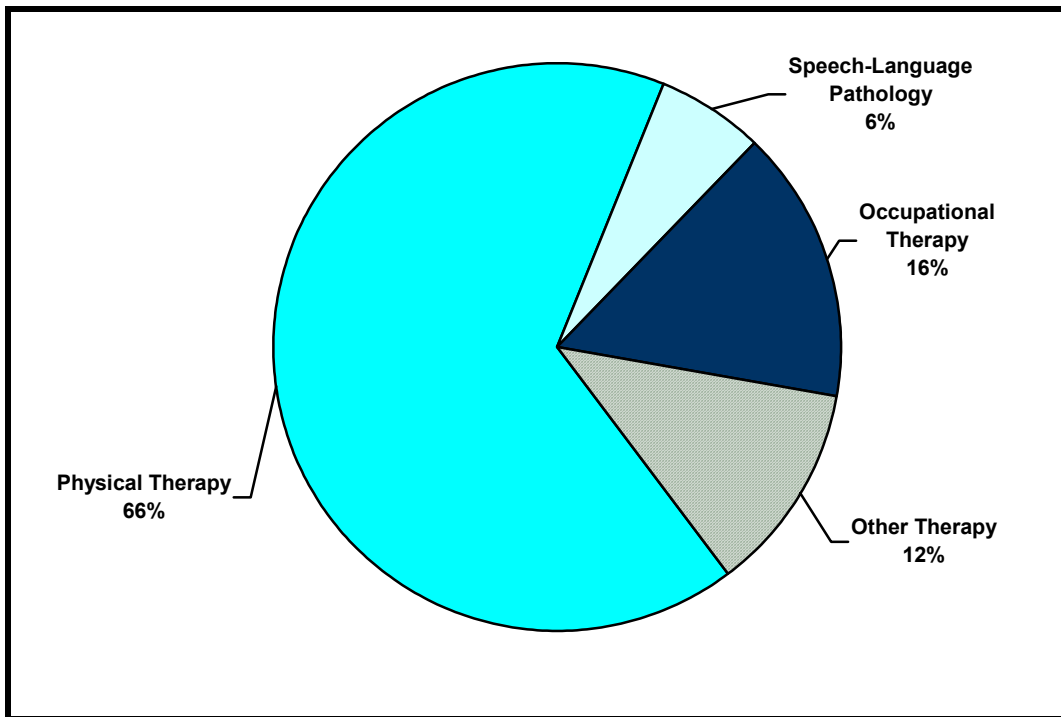


Figure 17. CY 2000 Outpatient Therapy Payments by Specialty

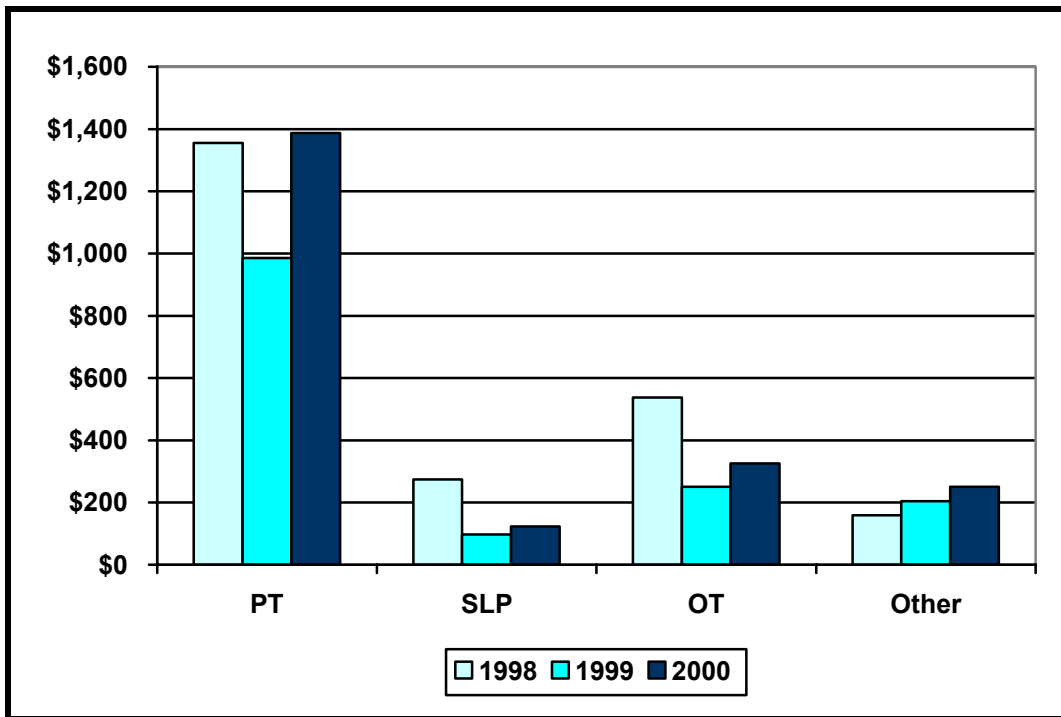


This trend of increased payments to ‘Other’ therapy providers is principally driven by increases in payments in physician settings, and to a lesser extent, nonphysician settings across the three years under study. Appendix Q contains tables indicating provider setting payment distribution breakdowns during the years under study.

The increasing payments to ‘Other’ therapy providers are consistent with several factors. First, these noninstitutional providers benefited from increases to the fee schedule over the three years under study. Second, these providers historically treated patients with low per-patient annual expenditures (*see section 5.1.4*), so there were likely few beneficiaries that may have been affected by the caps of CY 1999. Finally, the evidence that the therapy modifiers were not used to track the caps in these settings (*see section 5.2.1*) could indicate that some of these providers could have been paid for services beyond the \$1,500 per-beneficiary caps in CY 1999.

Despite the volume of outpatient therapy services that cannot be attributed to a particular specialty, Figure 18 clearly indicates that the payment policy changes impacted payments to those therapy specialties that could be identified from claims data. **In contrast to the 28.6 percent increase in payments for ‘Other Therapy’ from CY 1998 to CY 1999, PT, SLP and OT specialty services saw reductions in payments of 27.3 percent, 64.5 percent, and 53.3 percent respectively. While all three specialties saw increased payments in CY 2000, only PT returned to CY 1998 levels (+2.4%). In CY 2000, SLP payments remained 55.1 percent lower than CY 1998, and OT payments remained 39.4 percent below CY 1998.**

Figure 18. CY 1998 - 2000 Outpatient Therapy Payments by Specialty in Millions



There are several payment policy factors that could have influenced these trends. First, the payment reductions for all three specialties in CY 1999 were realized principally from three settings - SNF, CORF, and ORF. These settings were impacted by both the change from cost report payments to the fee schedule, as well as implementation of the therapy caps. The tables in Appendices Q-3.2.1 through Q-3.2.5 indicate the disproportionate impact by specialty across practice settings.

Second, the greater reduction in payments for SLP and OT compared to PT in CY 1999, and the lesser degree of recovery in CY 2000 may again reflect the direct impact of the transition to a fee schedule payment policy change on institutional providers. As indicated in Appendix B, there were 8,617 PT private practitioners that furnished Part B therapy in CY 1999, which increased to 11,602 in CY 2000. While SNFs, CORFs, ORFs and Other Institutional providers saw marked reductions in payments in CY 1999, noninstitutional providers such as PTs in private practice experienced increased fee schedule payments. Therefore, there was a natural outlet for physical therapists and beneficiaries to shift practice settings in order furnish outpatient physical therapy services during a period of well-publicized institutional provider staffing reductions.

Occupational therapists also had the option to furnish services as private practitioners. However, compared to PTs, there were significantly fewer OTs in private practice from CY 1998-2000 (335 to 676 to 1,040 OTPPs across the three years). The lack of significant numbers of OTPPs in CY 1999 offered a limited noninstitutional outlet for occupational therapists and patients affected by the institutional provider layoffs in CY 1999.

Speech-language pathology services realized the greatest payment reductions in 1999, in part because there was no noninstitutional provider alternative, since speech-language pathologists are not authorized to furnish Part B therapy services as private practitioners. Therefore, in CY 1999, patients who exceeded the cap could only go to a hospital (which was also affected by the fee schedule), or to a physician or other nonphysician practice setting (which are reported as ‘Other Therapy’ in this study).

Third, the residual reduction in payments for speech-language pathology and occupational therapy services in CY 2000 compared to physical therapy could be an artifact of the recent application of salary equivalency methodologies for SLP and OT services in institutions. Prior to being phased in during CY 1998, only PT payments to institutions were restricted by salary equivalency. SLP and OT services were paid to institutions on a reasonable cost basis. This payment methodology had resulted in significant increases in payments to institutions during the 1990s, and prompted several well-publicized reports by the Office of Inspector General highlighting a need for reform, and contributing to the application of the fee schedule to institutional providers in CY 1999. Physical therapy payments to institutions had been subject to salary equivalency limitations since CY 1972, and therefore, the application of the fee schedule most likely had a lesser impact on institutional physical therapy services.

Fourth, the marked decrease in institutional payments for physical therapy and speech-language pathology services during CY 1999 could have also been influenced by the effect of the combined \$1,500 therapy caps. With the high rate of institutional provider compliance (98.8%) with the use of the GP, GN, and GO therapy modifiers in CY 1999 (see *Appendix R*), and the high per-patient average payment for institutional patients (see *Appendix C-1.5*), it is possible that physical therapy services and/or speech-language pathology services were limited for beneficiaries that required both PT and SLP services. The extent to which this may have occurred cannot be estimated from claims data.

Fifth, the decline in particular services may be linked to findings of several studies that point to a decline in the availability of therapists, particularly SLPs. For example, in a September 3, 1999 study *Effect of the BBA-Related Changes in Medicare Reimbursement on the Delivery of Speech-Language Pathology Services* (ASHA-2 WP99-1), the American Speech-Language and Hearing Association found that in 1999, there was a 60% reduction in employment in skilled nursing facilities and nursing homes compared to 1997. In 1997, about 80% of the survey respondents had reported that they had been practicing primarily in a health care setting, but at the time of the 1999 survey, only 53 percent were in such settings. In 2002, only about 37 percent of ASHA member speech-language pathologists indicated they worked in the health care arena.

5.3 Utilization by Therapy Provider Setting

This study has identified nine major settings where Medicare beneficiaries received outpatient therapy services during 1998-2000. These nine settings differ in both the volume of services furnished and differences in the payment policies that affected them. As discussed in section 2.2, institutional providers that billed intermediaries for outpatient therapy services included Hospitals, SNFs, CORFs, ORFs (also commonly known as

Rehabilitation Agencies) and Other Institutions (such as Ambulatory Surgical Centers, Home Health Agencies). Noninstitutional providers that billed carriers for outpatient therapy services were grouped into PTPPs, OTPPs, Physician practices, and Nonphysician practices (such as Nurse Practitioners, Physician Assistants, etc.).

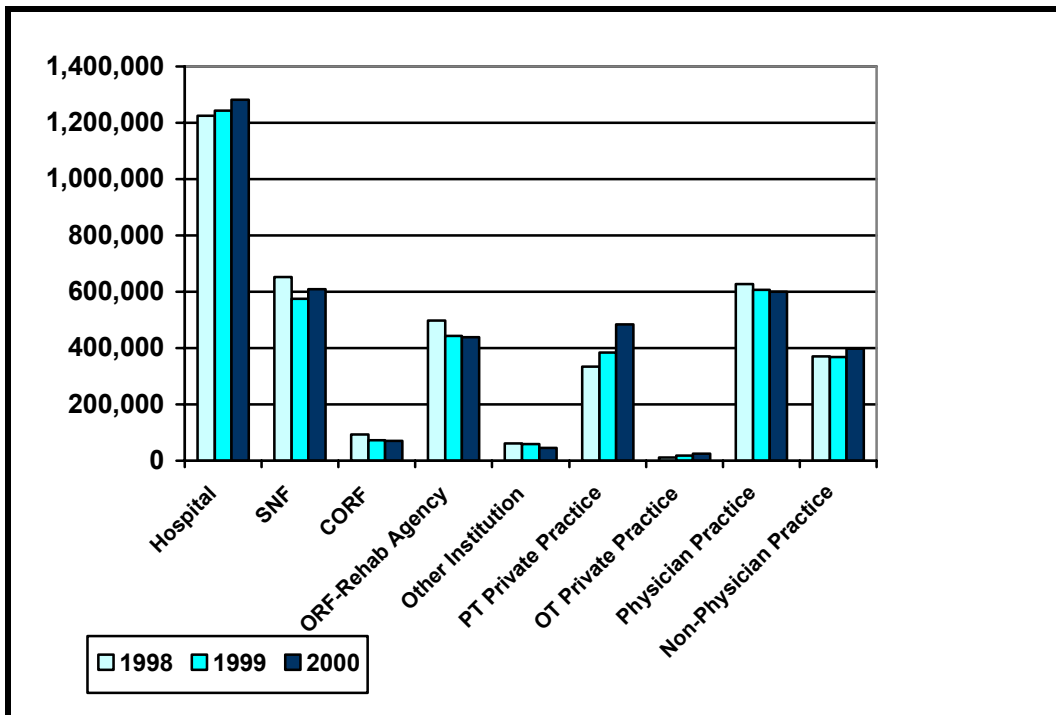
Claim level comparisons between the different settings are limited by the fact that institutional providers tend to generate claims less frequently and for greater dollar amounts (e.g. monthly claims), while noninstitutional providers tend to bill more frequently, often after every visit. As a result, the claims frequency volume and dollars per claim tend to be rather disparate. During the three-year period under study, the policies for reporting outpatient therapy procedure lines and HCPCS unit counts also were in transition. **Therefore, comparison of the volume of similar procedures varies between settings and across the three years, and may be misleading. This study determined that the only consistent and meaningful variables for comparison between settings from CY 1998 to CY 2000 were the total claim therapy payments made to each of the provider settings, and the number of unique patients treated in each setting.**

5.3.1 Analysis of the Number of Patients Treated by Provider Setting

From CY 1998 to CY 1999 there was a 2.5 percent reduction in the total number of patients receiving outpatient therapy services, from 3.51 million to 3.42 million individuals. This decline corresponded with the payment policy changes of both the switch of institutional provider payments from cost-based methodologies to the fee schedule, and the imposition of the \$1,500 annual per-beneficiary therapy caps. In CY 2000, the number of beneficiaries receiving outpatient therapy increased to 3.59 million individuals, a net increase of 2.2 percent from CY 1998 levels. This increase corresponded with the policy change of the moratorium on the \$1,500 caps (*see Appendix C-1.2*).

During CY 1999 there was a clear shift in the distribution of settings where Medicare beneficiaries received outpatient therapy services, and this shift largely reflected payment policy changes. Figure 19 highlights that in institutional settings affected by both the transition to the fee schedule and the imposition of the therapy caps (SNF, CORF, ORF, Other Institutions), the decline in the number of enrollees treated ranged from 4.1 percent for Other Institutions to 21.8 percent for CORFs. The number of patients treated by noninstitutional providers that were subject to caps for the first time (physicians and nonphysicians) also declined. Hospital settings were newly subject to the lower paying fee schedule, but were not subject to the \$1,500 therapy caps, and they saw a 1.5 percent increase in patient volume. Finally, PTs and OTs in private practice, who realized a 67 percent increase in annual per-beneficiary caps (from \$900 to \$1,500), saw a marked increase of 14.9 percent for PTPPs and 53.1 percent for OTPPs in the number of enrollees treated.

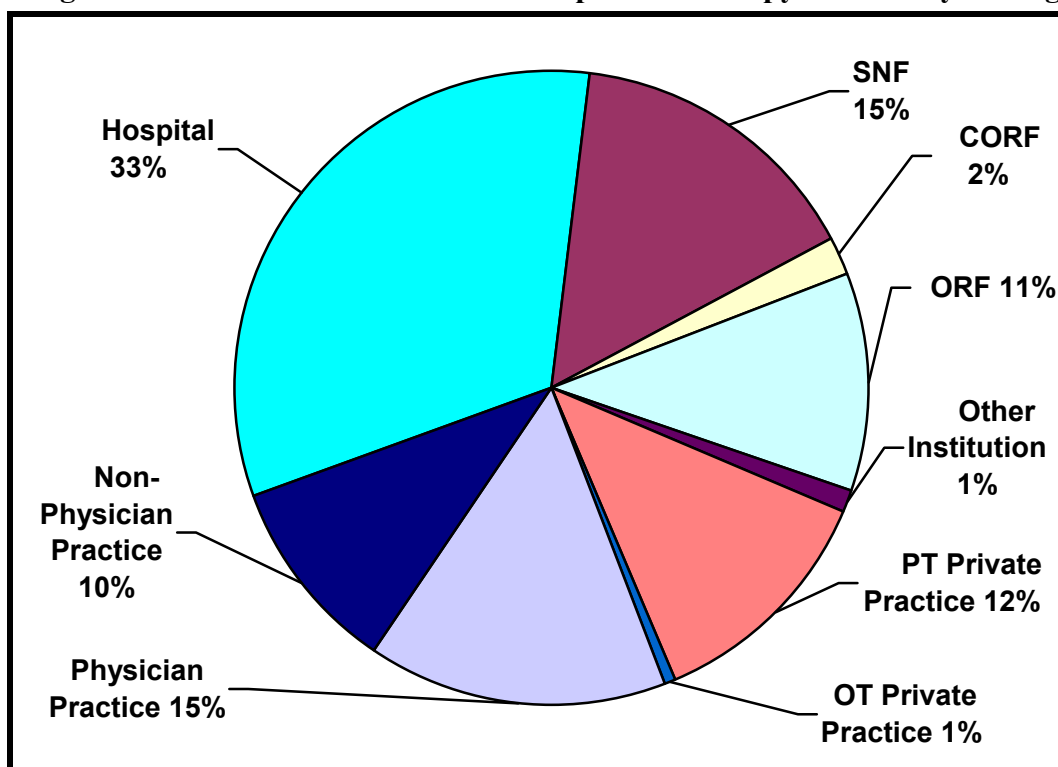
Figure 19. Annual Number of Outpatient Therapy Patients by Setting



In CY 2000, following the suspension of the caps, the changes in the percentage of enrollees receiving outpatient therapy by setting did not consistently follow the pattern that would be expected had the caps been the primary driving force in the 1999 declines (*see Appendix C-1.3*). With the suspension of the therapy caps in CY 2000, it would have been anticipated that fewer patients would require hospital outpatient therapy services, particularly those beneficiaries who would have sought hospital outpatient therapy because they surpassed the therapy caps in other settings, had they remained in effect. Instead, hospitals saw a 2.2 percent increase in the percentage of beneficiaries treated in CY 2000. CORFs, ORFs, and Other Institutions might be expected to show an increased percentage of beneficiaries in CY 2000 following the suspension of the caps; however, they continued to treat a smaller percentage of beneficiaries (-2.0 % to -22.8%). Physician practices also ran counter to expectation following the suspension of the caps in CY 2000 by treating 2.2 percent fewer enrollees. The remaining settings that had benefited from the moratorium on the enforcement of the \$1,500 caps demonstrated the expected increase in the percent of beneficiaries treated in CY 2000. SNFs, nonphysicians, PTPPs, and OTPPs demonstrated increases ranging from 4.4 to 40.6 percent. However, even though SNFs treated a higher number of beneficiaries in CY 2000 compared to CY 1999, the CY 2000 number remained 8.6 percent below CY 1998 levels. The fact that those institutional settings subject to both the transition to the fee schedule and the therapy caps in CY 1999 continued to treat fewer beneficiaries in CY 2000, despite suspension of the caps, indicates a potentially more long-lasting change in the settings where Medicare beneficiaries receive outpatient therapy services. Appendix C-1.3 indicates that this trend is principally away from institutions and towards therapists in private practice.

Figure 20 highlights the distribution of outpatient therapy patients by practice setting during CY 2000. Of the 3.5 million therapy outpatients in CY 2000, 10.1 percent received outpatient therapy in more than one setting during the year. Hospitals treated the majority of beneficiaries (33%), followed by SNF and physician practices (15%). Physical therapists in private practice have overtaken rehabilitation agencies as the fourth largest provider setting for outpatient therapy services.

Figure 20. CY 2000 Distribution of Outpatient Therapy Patients by Setting



5.3.2 Analysis of Annual Payments by Provider Setting

While the overall pattern of outpatient therapy payments declined from \$2.33 billion in CY 1998 to \$1.54 billion in CY 1999, then rebounded partially to \$2.01 billion in CY 2000, different patterns occurred depending upon the practice setting. Table 14 illustrates that the total payment changes for each setting followed patterns consistent with the payment policy changes that occurred. In CY 1999, SNFs, CORFs, ORFs, and Other Institutions had payment reductions from 20.9 percent to 65 percent from CY 1998 levels. These were settings that were subject to both the implementation of the fee schedule, and the imposition of the therapy caps. Even with the suspension of the caps in CY 2000, these settings demonstrated significantly lower payments from CY 1998, ranging from 36.0 percent to 47.4 percent. **This suggests that the majority of the reduced payments to these institutions in CY 1999 resulted from imposition of the fee schedule.** Hospitals, which had the fee schedule imposed in CY 1999 but which were not subject to payment caps, realized a 33.7 percent increase in payments despite only a 1.5 percent increase in patients seen (*see Appendix C-1.2*). This pattern, which continued in CY 2000, shows an

increased intensity of services furnished in hospital settings. All noninstitutional settings had increased payments in both CY 1999 and CY 2000, which were consistent with increases in the fee schedule for these four settings. Additionally, the marked increases in PT and OT private practice total payments are consistent with the increase in the caps that applied to them from \$900 in CY 1998, to \$1,500 in 1999, to no caps in CY 2000. Additionally, the PTPP and OTPP increases were facilitated by the marked increase in the number of patients treated in these settings as described in section 5.3.1 of this study. Conversely, the marked increase in payments to nonphysician practitioners cannot be attributed to increased patient volume.

Table 14. Annual Payments for Medicare Part B Patients by Provider Setting

| All Part B Provider Settings | Total Therapy Payments (\$) | | | % Change | | |
|------------------------------|-----------------------------|------------------------|------------------------|---------------|--------------|---------------|
| | 1998 | 1999 | 2000 | 98-99 | 99-00 | 98-00 |
| Hospital (B) | \$363,821,249 | \$493,523,567 | \$550,884,805 | 35.7% | 11.6% | 51.4% |
| SNF (B) | \$977,513,243 | \$342,447,889 | \$528,342,932 | -65.0% | 54.3% | -46.0% |
| CORF (B) | \$165,610,941 | \$61,402,584 | \$87,104,962 | -62.9% | 41.9% | -47.4% |
| ORF (B) | \$514,209,791 | \$240,166,105 | \$328,966,148 | -53.3% | 37.0% | -36.0% |
| Other Institution (B) | \$26,585,245 | \$21,016,529 | \$14,505,748 | -20.9% | -31.0% | -45.4% |
| PT Private Practice | \$119,139,543 | \$172,080,945 | \$316,011,790 | 44.4% | 83.6% | 165.2% |
| OT Private Practice | \$3,421,649 | \$6,328,962 | \$14,473,106 | 85.0% | 128.7% | 323.0% |
| Physician Practice | \$154,447,265 | \$199,148,171 | \$242,596,366 | 28.9% | 21.8% | 57.1% |
| Nonphysician Practice | \$1,296,757 | \$1,916,780 | \$4,359,406 | 47.8% | 127.4% | 236.2% |
| All Part B Providers | \$2,326,045,682 | \$1,538,036,816 | \$2,087,301,077 | -33.9% | 35.7% | -10.3% |

During this same period, there were changes in the total Part B Trust Fund benefit payments that occurred nationally. As Figure 21 demonstrates, in CY 2000 the total Part B outpatient therapy payments of \$2.1 billion represented only 2.4 percent of the \$87.2 billion total Part B payments for that year. In addition, Table 15 below highlights that while total Part B payments for outpatient therapy services declined by 10.3 percent from CY 1998 to CY 2000, the overall Part B expenditures for non-therapy services actually increased by 17.4 percent.

Figure 21. CY 2000 National Part B Therapy Expenditures Relative to Overall Part B Benefit Payments for All Services

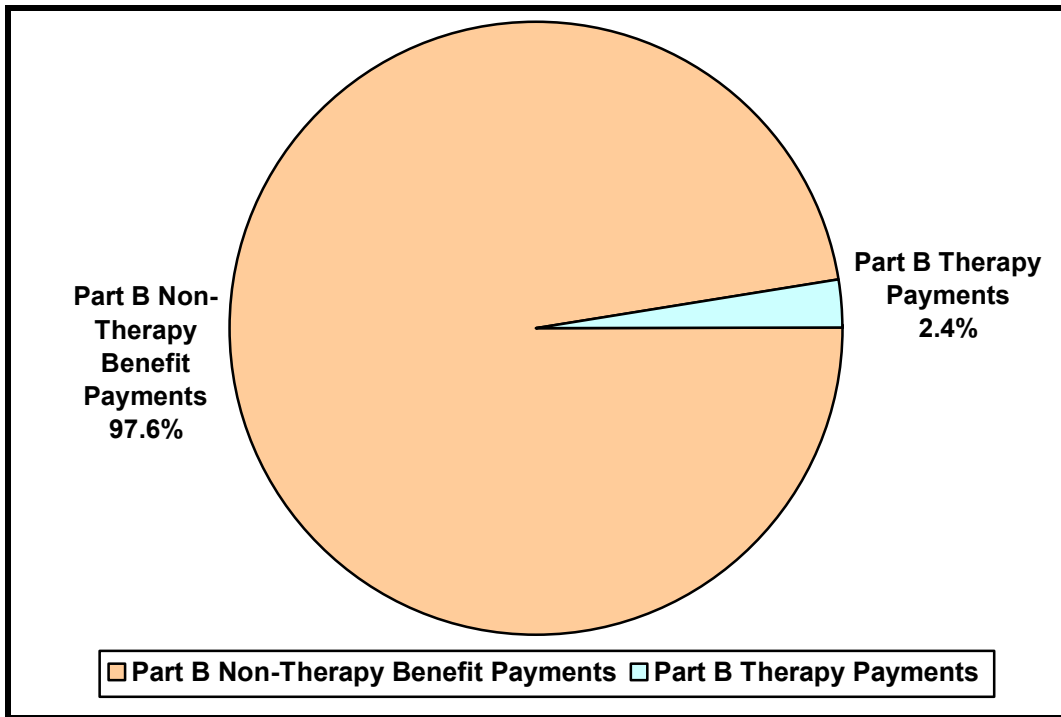


Table 15. National Part B Outpatient Therapy Expenditures (in Billions) Relative to Overall Part B Benefit Payments for All Services

| | 1998 | 1999 | 2000 | % Change | | |
|-----------------------------------------------------------|---------|---------|---------|----------|-------|--------|
| | | | | 98-99 | 99-00 | 98-00 |
| Part B Non-Therapy Benefit Payments (\$ billions) | \$72.51 | \$77.47 | \$85.13 | 6.8% | 9.9% | 17.4% |
| Part B Therapy Payments (\$ billions) | \$2.33 | \$1.54 | \$2.09 | -33.9% | 35.7% | -10.3% |
| Total Part B Benefit Payments (\$ billions) ³⁰ | \$74.84 | \$79.01 | \$87.21 | 5.6% | 10.4% | 16.5% |
| % Outpatient Therapy | 3.1% | 1.9% | 2.4% | -37.4% | 22.9% | -23.0% |

5.3.3 Analysis of Average Annual Per-Patient Payments by Provider Setting

Section 5.1.4 of this study discussed the differences in per-patient payments by setting that were observed across the three years under study. Appendices C-1.5, C-2.5 and C-3.5 highlight these changes.

³⁰ 2002 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds, Table II.C5, p.81

5.3.4 Analysis of Annual Per-Enrollee Payments by Provider Setting

Another measure of the effect of payment policy changes involved an analysis of the payments per enrolled beneficiary. Appendices C-1.6, C-2.6 and C-3.6 indicate the average Medicare outpatient therapy payments distributed per enrolled beneficiary across practice settings. Table 16 indicates that the overall annual Medicare payment per-enrollee in CY 1998 was \$57.15. In CY 1999, that number was reduced by 34.5 percent to \$37.43 per-beneficiary. In CY 2000, there was an increase to \$50.19, which remained 12.2 percent less per-beneficiary than CY 1998.

Table 16. Annual Per-Enrollee Medicare Part B Payments

| Per-Enrollee Payments | 1998 | 1999 | 2000 | % Change | | |
|------------------------------|---------|---------|---------|----------|-------|--------|
| | | | | 98-99 | 99-00 | 98-00 |
| All Part B Provider Settings | \$57.15 | \$37.43 | \$50.19 | -34.5% | 34.1% | -12.2% |

Figures 22 and 23 highlight the changes from CY 1998 to CY 2000 in the distribution of outpatient therapy payments by setting per-enrollee. Most notable is the marked reduction in SNFs from \$24.02 per-enrollee in CY 1998 to \$12.70 in CY 2000, a 47.1 percent drop.

Figure 22. CY 1998 Distribution of Outpatient Therapy Payments per-enrollee

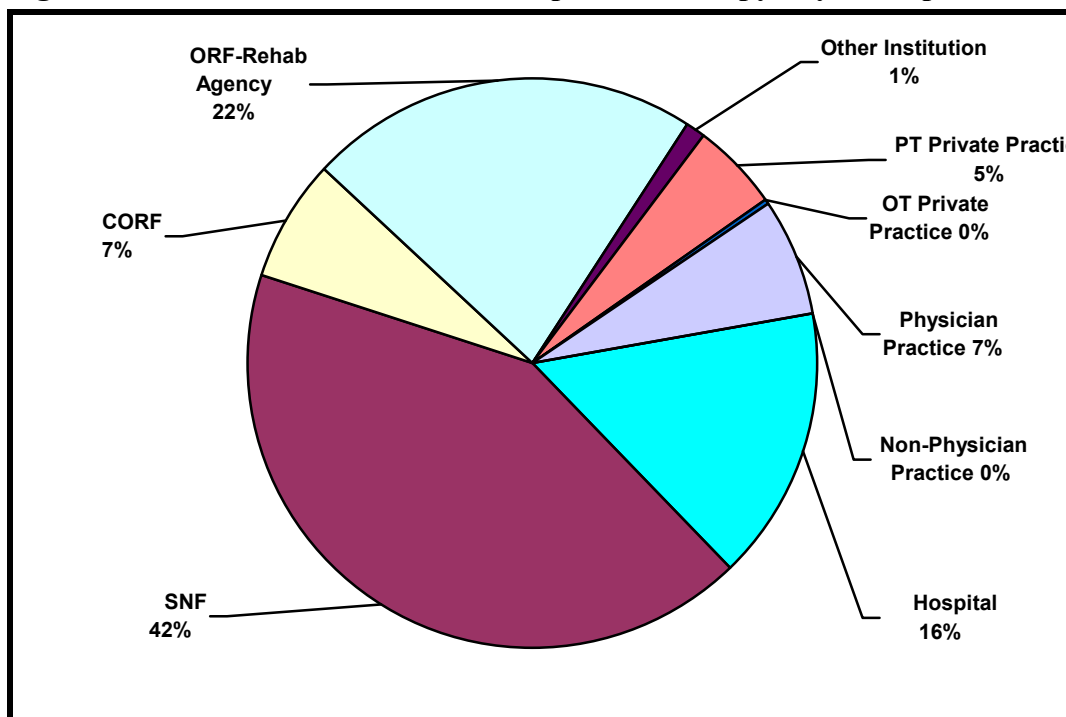
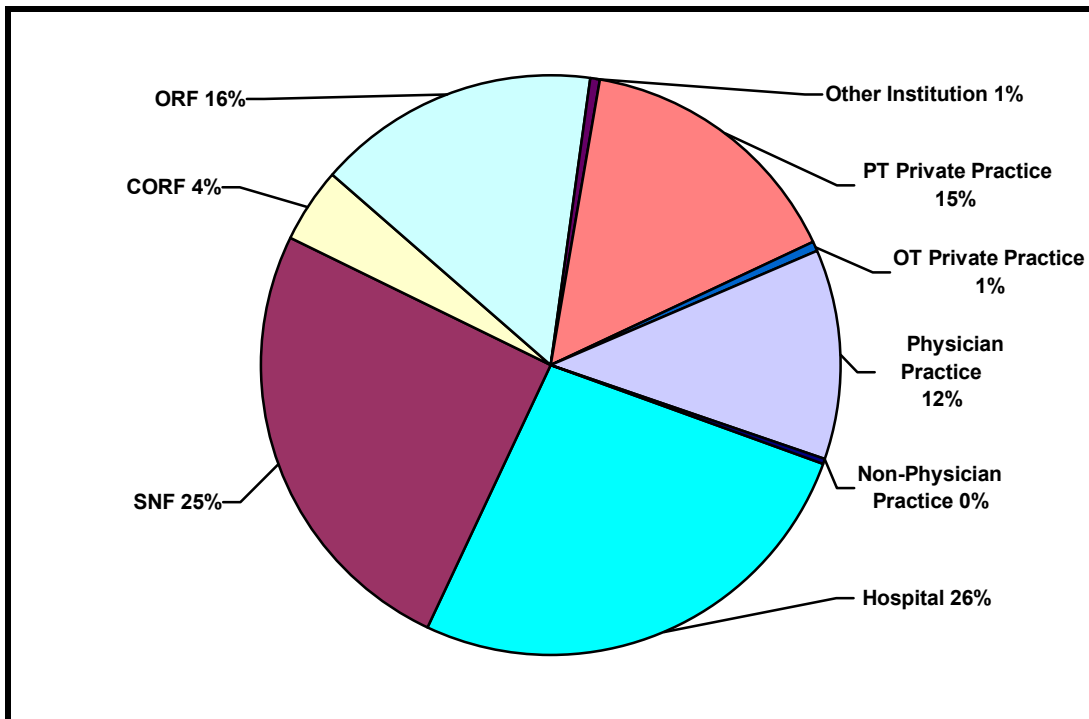


Figure 22. CY 2000 Distribution of Outpatient Therapy Payments per-enrollee



5.3.5 Analysis of the Number of Providers Billing for Outpatient Therapy Services

One factor that can influence the utilization of outpatient therapy services by setting is the number of providers that furnished such services in any given year. One hypothesis suggests that some of the changes in payments per setting could be the result of changes in provider enrollment.

For example, many therapists may have enrolled as institutional ORFs (Rehabilitation Agencies) prior to CY 1999 to avoid the annual per-patient caps that noninstitutional therapists in private practice faced. In addition, there were financial advantages inherent in the cost report payments that were available to ORFs at that time. With the imposition of the fee schedule and therapy caps on institutional providers in CY 1999, the financial advantages of participating as an ORF declined. As a result, there may have been a number of therapists who disenrolled as institutional providers and re-enrolled as noninstitutional private practitioners during the span of this study.

Also, effective January 1, 1999, the provider enrollment policy changed for PTs and OTs in private practice. At that time, therapists could begin enrolling as providers without the requirement to maintain a clinical office that required survey and certification, permitting therapists to treat patients in the therapist's office or in the patient's home. Additionally, PTs and OTs were also permitted to enroll if employed by a therapist in private practice, a therapist group practice, or a therapist corporation. This created an incentive for more

therapists to shift to private practice, and increased the numbers of therapists that could be individually identified on claims as the person furnishing the therapy services.

At the same time, nonphysician practitioners such as physician assistants, clinical nurse specialists, and nurse practitioners were also permitted to furnish outpatient therapy services within the scope of their practice. This provided an opportunity for additional providers to furnish outpatient therapy services. This study therefore analyzed the number of unique providers billing for outpatient therapy services to examine a possible association between changes in utilization and provider enrollment.

Table 17. Annual Medicare Part B Payments per-Unique Provider

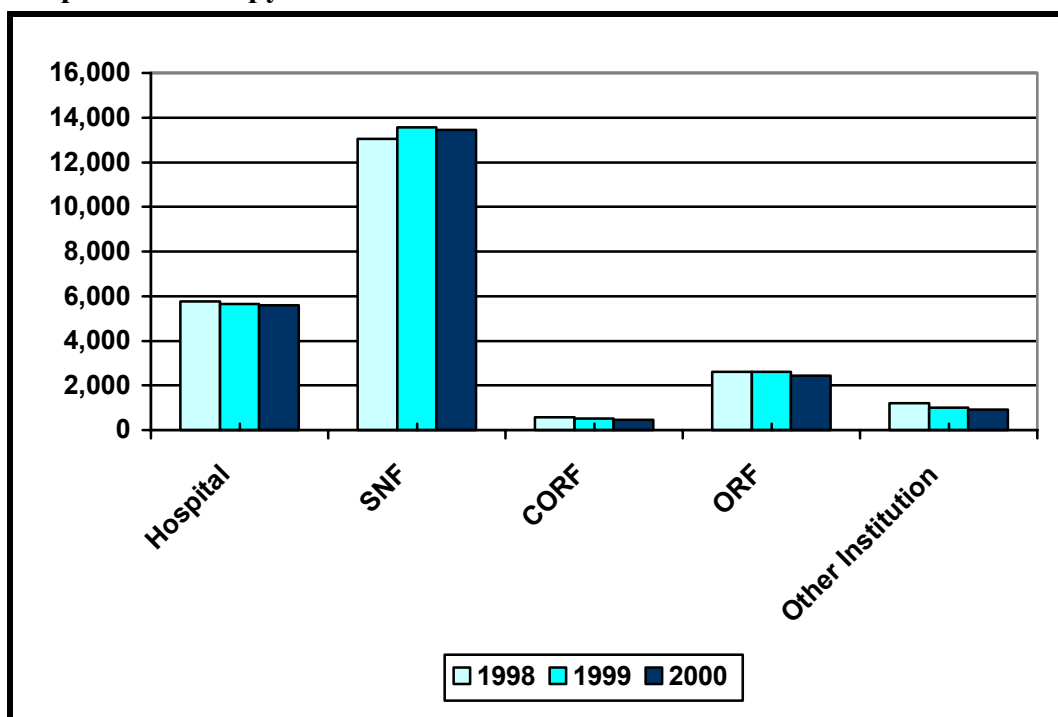
| All Part B Provider Settings | Therapy Payments Per-Provider | | | % Change | | |
|------------------------------|-------------------------------|-----------------|-----------------|---------------|--------------|---------------|
| | 1998 | 1999 | 2000 | 98-99 | 99-00 | 98-00 |
| Hospital (B) | \$63,174 | \$87,473 | \$98,355 | 38.5% | 12.4% | 55.7% |
| SNF (B) | \$74,963 | \$25,271 | \$39,297 | -66.3% | 55.5% | -47.6% |
| CORF (B) | \$286,029 | \$119,693 | \$187,726 | -58.2% | 56.8% | -34.4% |
| ORF (B) | \$197,621 | \$91,912 | \$134,767 | -53.5% | 46.6% | -31.8% |
| Other Institution (B) | \$22,284 | \$20,870 | \$16,028 | -6.3% | -23.2% | -28.1% |
| PT Private Practice | \$22,479 | \$19,970 | \$27,238 | -11.2% | 36.4% | 21.2% |
| OT Private Practice | \$10,214 | \$9,362 | \$13,916 | -8.3% | 48.6% | 36.3% |
| Physician Practice | \$4,674 | \$6,300 | \$6,957 | 34.8% | 10.4% | 48.8% |
| Nonphysician Practice | \$1,095 | \$379 | \$171 | -65.4% | -55.0% | -84.4% |
| All Part B Providers | \$36,900 | \$22,198 | \$21,764 | -39.8% | -2.0% | -41.0% |

The tables in Appendices B-1 and B-2 identify the number of unique providers that submitted outpatient therapy claims within the nine settings during the years 1998-2000. See Figure 24 for institutional providers and Figure 25 for noninstitutional providers. Because of the large variation in physician and nonphysician specialties within the noninstitutional providers, and the unexpected changes in the number of individual nonphysician specialty providers billing for outpatient therapy services, Appendices B-3 and B-4 were created to provide a breakdown of unique providers by reported specialty.

From CY 1998 to CY 2000, the overall number of institutional providers billing for outpatient therapy services declined by 1.4 percent. Within the institutional providers, an unexpected pattern occurred with hospital providers. It was reported by Congress that one of the reasons that hospitals were exempted from the outpatient therapy caps in CY 1999 was to permit beneficiaries that reached their caps in other settings to obtain the additional services from hospital therapy departments. This would create an incentive for additional hospitals to furnish outpatient therapy services. However, during CY 1999 there were 117 fewer (-2.0%) hospitals furnishing outpatient therapy service than in CY 1998. This pattern continued in CY 2000 as 41 fewer hospitals billed for outpatient therapy services, reducing the national total to 5,601 hospitals furnishing outpatient therapy services. One reason for this decline could be that the exemption from the therapy caps in CY 1999 was insufficient to compensate for the revenue losses caused by the implementation of the fee schedule. In addition, during the period under study, hospitals

nationwide were experiencing consolidation. This may have contributed to the decreased number of hospitals furnishing outpatient therapy services.

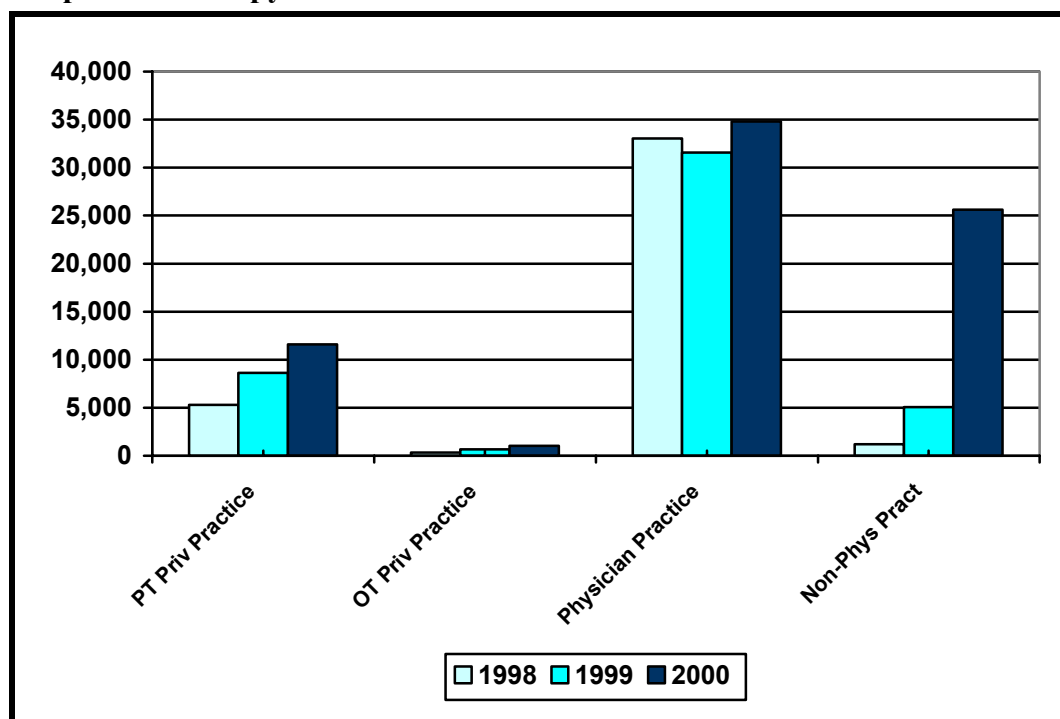
Figure 24. Number of Unique Institutional Providers Submitting Claims for Outpatient Therapy Services



The 3.9 percent increase in the number of SNFs billing for outpatient therapy services in CY 1999 initially appears to contradict the overall utilization statistics that demonstrated marked declines in payments and beneficiaries treated. However, this increase is most likely an artifact of the SNF consolidated billing requirements. A component of the BBA '97 requirement for SNF Part A PPS was that all outpatient Part B therapy services furnished to residents of a Part A SNF provider must be billed by the SNF. Prior to this time, SNFs were permitted to allow other providers such as ORFs to furnish outpatient therapy and bill under their own provider number. Therefore, while an ORF may have billed for outpatient therapy services for a SNF resident in CY 1998, the SNF was required to bill for the services furnished by the ORF in CY 1999. The net result was an increase in the number of SNFs submitting Part B therapy claims in 1999.

From CY 1998 to CY 2000, the number of CORF, ORF and Other institutional providers submitting outpatient therapy claims declined as anticipated (ranging from –6.2% to –24.1%). This change can be attributed to the impact of the SNF consolidated billing requirements and a number of providers changing their enrollment from institutional to noninstitutional.

Figure 25. Number of Unique Noninstitutional Providers Submitting Claims with Outpatient Therapy Services



Unusual patterns from CY 1998 to CY 2000 were also observed among noninstitutional providers. Physical and occupational therapists demonstrated marked increases in the number of individual providers submitting outpatient therapy claims, which is consistent with both the reduction in the number of institutional providers during the same period, and the changes in provider enrollment policy for privately practicing therapists. Over the three years under study, the number of PTPPs increased by 118.9 percent to 11,602 individuals while the number of OTPPs increased by 210.4 percent to 1,040 individuals.

By far, the vast majority of noninstitutional providers billing for outpatient therapy services were physician practice providers. While the number of physician providers billing for outpatient therapy declined by 4.4 percent in CY 1999, the 34,083 individual physician providers is nearly triple the number of therapist private practitioners. Appendix B-3 lists the number and specialties of individual physician providers submitting claims containing outpatient therapy services, ranked by their CY 2000 frequency.

It is possible that although physician providers are billing for these services as ‘incident to’ their professional services, the services may actually be furnished by licensed therapists. The claims history data used for this study does not contain information regarding the qualifications of the individuals furnishing such ‘incident to’ services, therefore such conclusions cannot be validated, due to current limitations of claims reporting requirements. There is no requirement that personnel furnishing ‘incident to’ therapy services be qualified therapists. However, a related medical review study of outpatient

therapy services, concurrently being conducted by this contractor, will examine the medical records of claims from all settings, and may provide some evidence of the prevalence of licensed therapist services on physician-submitted claims.

Of particular interest to this study was the dramatic increase in the number of nonphysician practitioners submitting claims containing outpatient therapy services in CY 1999, which continued to increase in CY 2000. The size of the increase over two years (from 1,191 to 25,604 providers) required further investigation. Appendix B-4 indicates that the principal increase in the number of nonphysician providers submitting claims containing outpatient therapy procedures was driven by the chiropractic specialty. Internal data validation indicates that this increase in the number of providers with the chiropractor specialty may be an artifact of the recent conversion of the National Claims History (NCH) File from Version H to Version I.

While there were expected increases in the number of physician assistants, nurse practitioners, and clinical nurse specialists billing for outpatient therapy services, which correspond with the payment policy changes, there were overall very few of these providers furnishing outpatient therapy services. In CY 2000, there were 345 nurse practitioners, 227 physician assistants, and 16 clinical nurse specialists. Also interesting was the number of psychologists (350), audiologists (258), and unknown suppliers (150) who submitted claims containing ‘always therapy’ procedures.

It must be emphasized at this time that the intent of this study was to identify the utilization of outpatient therapy services that a Medicare beneficiary received. To that extent, the selection criteria for nonphysician provider claims included any that contained ‘always therapy’ HCPCS procedure codes. Therefore, even if a therapy procedure was not paid, it was included as a ‘billed’ procedure for this analysis. This methodology permits an analysis of potential program vulnerabilities, including payments for non-covered services.

Appendix U, an example of one such review, contains a three-year analysis of the claims submitted by the chiropractic specialty that contained ‘always therapy’ HCPCS, to determine if payment contractors were properly handling the claims submitted by this category of providers, which had a limited range of services for which they could receive Medicare payment. Briefly, as noted in Appendix B, Chiropractic (specialty #35) may not be paid for outpatient therapy services per 42 CFR 410.22(b)(2) and section 1861(r)(5) of the Act. Chiropractic specialties can furnish and be paid for chiropractic procedures under Medicare. The results indicate that although Medicare beneficiaries were billed by chiropractors for \$70 million of ‘always therapy’ HCPCS procedures in CY 1998, \$74 million in CY 1999, and \$79 million in CY 2000, Medicare contractors properly processed these claims and issued no payments.

Another important consideration is that the number of physician and nonphysician provider numbers reported includes all providers that billed for therapy procedures, and not the number actually receiving payments. Therefore, if all the ‘always therapy’ HCPCS procedures of any individual provider were denied in a given year, then that individual remains listed as a provider in this study, even though they received no payment. The

table in Appendix C-1.7 (*see also Table 17 above*) clearly demonstrates the impact of this on the average annual payments-per provider by setting. **Because of the large number of reported nonphysician chiropractic providers in CY 1999 and CY 2000 who did not receive outpatient therapy payments, the average per-provider payments are skewed markedly downward, and do not represent the average for those nonphysician providers that actually were paid.** However, the average per-provider payment table does demonstrate interesting information regarding institutional providers. Most notably, even when the total number of providers is considered, SNFs, CORFs, ORFs and other institutions showed marked declines in per-provider annual payments in CY 1999. These payments remained significantly reduced in CY 2000 (reduction range 28.1% to 47.6% per setting), even after the suspension of the caps.

5.4 Utilization Analysis by State

The variation in utilization remained significant in different geographical areas. The following two sections describe the utilization of outpatient therapy services by the geographic location of the beneficiary's residence. A policy question to be addressed here is whether the changes in payment policy had a different impact on areas with distinguished characteristics of beneficiaries, providers and different patterns of practice.

Measurement of the impact of any national payment policy change can be indicated by two factors. First, changes in the percentage of enrolled beneficiaries receiving the benefit could indicate access to care issues. In this analysis, individual state variations across the three years are described (section 5.5 describes variations by CMS region of residence). Second, changes in average payments per-patient or per-enrollee at a state level could indicate local financial impacts of the payment policy changes on providers, as well as indicate potential areas of under/over utilization of services relative to other states.

5.4.1 Medicare Enrollees by State

From CY 1998 to CY 1999, the number of Medicare enrollees increased from 40.7 million to 41.1 million, an increase of 1.0 percent (*see Appendix A-5*). With the exception of the District of Columbia (-1.0%), all states demonstrated an increase in enrollment. Nine states demonstrated an increased enrollment greater than 2 percent in 1999 (range +4.6% to +2.0%). These states were Alaska, Nevada, Arizona, Delaware, Idaho, New Mexico, South Carolina, Puerto Rico and Utah. **During this period, the percentage of enrolled beneficiaries per state receiving outpatient therapy services declined by 2.5 percent nationally.** This represents a decrease from 3.51 million in CY 1998 to 3.42 million in CY 1999 (*see Appendices G-1.1 and G 1-3*).

From CY 1999 to CY 2000, the number of Medicare enrollees increased an additional 1.2 percent to 41.6 million. The District of Columbia saw an additional decline of 0.2 percent in enrolled beneficiaries. All other states saw additional growth in enrollment. Fourteen states demonstrated an increase in enrollment greater than 2 percent (range 5.0% to 2.0%). These states were Alaska, Nevada, Utah, Arizona, Puerto Rico, South Carolina, Hawaii, Idaho, Colorado, Delaware, Georgia, New Hampshire, North Carolina, and Virginia. **During this period, the percentage of enrolled beneficiaries receiving**

outpatient therapy services rebounded by 4.8 percent nationally. This represents an increase from 3.42 million in CY 1999 to 3.59 million in 2000.

Over the period from CY 1998 to CY 2000, Medicare enrollment increased by 2.2 percent (*see Appendix A-1*). Only the District of Columbia had an overall decline in enrollment over this period (-1.2%). Of the remaining states, ten demonstrated a two-year enrollment increase of greater than 4 percent (range +9.8% to 4.0%). They were Alaska, Nevada, Arizona, Utah, Idaho, Puerto Rico, South Carolina, Delaware, Georgia, and Hawaii.

With the rebound in the total number of beneficiaries treated in CY 2000, the percentage of enrolled beneficiaries receiving outpatient therapy services returned to CY 1998 levels (*see Appendix G 1.3*). In addition, during the three years under study, there were notable variations observed in both the total number of beneficiaries receiving outpatient therapy services, and the percentage of enrolled beneficiaries receiving outpatient therapy services *between* states, and *within* states from 1998-1999. The following sections describe these variations.

5.4.1.1 Between-State Variations in Patient Volume

In CY 2000, ten states accounted for 51.9 percent of enrollees receiving outpatient therapy services. As identified in Appendix G-1.2, the top ten states in order were Florida, California, New York, Texas, Pennsylvania, Ohio, Illinois, Michigan, New Jersey, and North Carolina. Each of these states had over 100,000 enrollees receiving outpatient therapy services. The rankings were similar in CY 1999 for the top nine states. Also in CY 1999, Texas surpassed Pennsylvania as the fourth ranked state in terms of outpatient therapy patients treated.

There were wide variations between states in the percentage of enrollees who received outpatient therapy services. In CY 1998, fifteen states had representation of greater than 10 percent of their enrollees receiving outpatient therapy, ranging from 14.8 percent to 10.1 percent (*see Appendix G-1.3*). They were (alphabetically) Connecticut, Florida, Idaho, Indiana, Iowa, Kansas, Minnesota, Montana, Nebraska, New Hampshire, North Dakota, South Dakota, Vermont, Wisconsin and Wyoming. In CY 1999, Connecticut saw its percentage drop to 9.5 percent. During CY 2000, the number of states with greater than 10 percent of enrollees accessing outpatient therapy returned to fifteen with the addition of Alaska at 10.2 percent.

Conversely, over the same three-year period, eight states had 7.0 percent or fewer of their enrolled beneficiaries receiving outpatient therapy services (range 7.0% to 3.5%). In CY 1998, they were (alphabetically) Arizona, California, Hawaii, Nevada, Oregon, Puerto Rico, Rhode Island, and the U.S Virgin Islands. **There was no relative change in these eight states over the three-years under study. These findings suggest a consistent pattern in state-by-state differences in the percentage of Medicare enrollees receiving outpatient therapy services. These variations persisted despite the policy changes during the three years.**

5.4.1.2 Within-State Variations in Patient Volume

From CY 1998 to CY 2000, there were notable variations in both the number of outpatient therapy patients treated within individual states, and the percent of enrollees accessing outpatient therapy within individual states. As Appendices G-1.2 and G-1.3 demonstrate, while there were 2.5 percent fewer patients treated in CY 1999 across all state groups, ten states saw increases in total patients treated of 3.0 percent or greater (range 19.8% to 3.0%). They were (alphabetically) Alaska, Delaware, Hawaii, Minnesota, Puerto Rico, South Dakota, Utah, Vermont, U.S. Virgin Islands, and Wyoming. Of these states, only Hawaii, Puerto Rico and the U.S. Virgin Islands demonstrated an increase in percentage of enrollees accessing outpatient therapy that approached the national average. The remaining states actually increased their percentage over the national average.

Conversely, in CY 1999, there were eight states that had greater than a 6 percent reduction in the number of outpatient therapy patients (range -6.5% to -11.3%). They were (alphabetically) Arkansas, Colorado, Connecticut, District of Columbia, Massachusetts, Missouri, Pennsylvania, and Rhode Island. Of these states, only Connecticut and Missouri saw their rate reduce to approach the national average. The other states either saw their percent of enrollees drop below the national average, or drop even further below the national average than their levels in CY 1998.

By CY 2000, as identified in Appendices G-1.2 and G-1.3, there were eleven states with net increases in the number of outpatient therapy patients from CY 1998 of greater than 10 percent (range 10.8% to 30.5%). They were (alphabetically) Alaska, Arizona, Delaware, Kentucky, New Hampshire, Puerto Rico, South Dakota, Utah, Vermont, U.S. Virgin Islands, and Wyoming. Of these, only Arizona, Kentucky, Puerto Rico, and the U.S. Virgin Islands saw the percentage of enrollees accessing outpatient therapy increase to grow closer to the national average of 8.6 percent. The remaining seven states saw their outpatient rates increase even higher over the national average.

Conversely, from CY 1998 to 2000, while the national total outpatient therapy population increased by 2.2 percent, seven states demonstrated declines of greater than 3 percent (range -3.1% to -13.0%). They were (alphabetically) Colorado, Connecticut, District of Columbia, Massachusetts, Missouri, Puerto Rico, and Rhode Island. Of these, only Pennsylvania's rate of enrolled beneficiaries reduced towards the national average of 8.6 percent. The remaining six states were already below the national average, and saw their rates drop even lower.

These findings indicate that there were between-state variations in the percentage of enrolled beneficiaries receiving outpatient therapy services across the three-years under study. **While most states reflected rates of access to outpatient therapy services similar to the national average, and reflected year-to-year changes consistent with the national patterns, some states that had higher rates of patient access saw those rates escalate further away from the national average. Conversely, some states that**

demonstrated rates well below the national average saw that disparity increase even more.

5.4.2 Annual Payments by State

The pattern of outpatient therapy payments from CY 1998 to CY 2000 varied dramatically between states. Section 5.4.1 identified that the relative ranking between states in the total number of patients treated remained relatively stable. This section shows that the ranking by payments markedly differed from CY 1998 to CY 1999, and again from CY 1999 to CY 2000. Appendices G-1.4, G-1.5, and G-1.6 identify the total payments per-state, and the total payments per-patient and per-enrollee in each state.

5.4.2.1 Between State Variations in Payments

During CY 1998, ten states accounted for 52.1 percent of the total outpatient therapy payments (range \$225.7 million to \$66.8 million). They were (in order) Florida, Texas, California, Pennsylvania, New York, Michigan, Ohio, Illinois, Louisiana, and New Jersey. In CY 1999, the top ten states list changed, with a total lower payment, yet the top ten states still accounted for 53.4 percent of total outpatient therapy payments (range \$151.4 million to \$31.7 million). They were (in order) Texas, Florida, New York, California, Pennsylvania, Michigan, Ohio, New Jersey, Illinois, and Massachusetts. It is notable that Louisiana, which was ranked ninth in CY 1998 with \$70.6 million dropped out of the top ten list, as its payments declined by 63.9 percent in CY 1999 to \$25.5 million. In CY 2000 another redistribution of the top ten occurred, as overall payments nationally recovered (range \$206.2 million to \$41.6 million). The top ten states in CY 2000 still received over half of all outpatient Medicare payments at 50.8 percent. They were (in order) Florida, Texas, California, New York, Pennsylvania, Ohio, Michigan, New Jersey, Illinois, and Indiana.

As has been described in prior sections of this report, the principal source of the reductions in payments in CY 1999 was in institutional provider settings, particularly SNFs, CORFs, and ORFs. Therefore, it would be expected that in states where more patients receive outpatient therapy services from institutional providers, more significant declines in payments in CY 1999 would be observed than in states with a higher utilization of noninstitutional services. Appendices G-2.1 through G-3.6 compare the state-by-state impact of patients treated and payments made to institutional providers and noninstitutional providers. A clear example of such comparisons can be seen in the state of Louisiana. In CY 1998, this state was ranked ninth in total payments at \$70.6 million (*see Appendix G-1.4*). Of that amount, \$68.9 million was paid to institutional providers (*see Appendix G-2.4*). Meanwhile in CY 1999, while Louisiana's total payments dropped 63.9 percent to \$37.4 million, payments to noninstitutional providers actually increased by 119.6 percent (*see Appendix G-3.4*). Therefore, as with the national trend, institutional provider payment reductions in CY 1999 drove the state reductions in payments. This also indicates the tremendous local impact on payments that occurred in CY 1999. The following section will describe some of the state-specific impacts.

5.4.2.2 Within-State Variations in Payments

From CY 1998 to CY 2000, there were significant fluctuations in total payments, average annual payments per-patient, and average annual payments per-enrollee within individual states. While the average payments for outpatient therapy services declined by 33.9 percent nationally in CY 1999, Alaska and New York actually realized increased payments (*see Appendix G-1.4*). In both states, there was a significant increase in total payments to noninstitutional providers (*see Appendix G-3.4*). In New York, there was an actual decrease in institutional provider payments of 16.2 percent (*see Appendix G-2.4*). In both cases, the increases could be attributed to two principal factors. First, they had a higher ratio of noninstitutional providers to institutional providers compared to other states. This means that they benefited from the fee schedule increases while being less impacted by the imposition of the fee schedule on institutional providers in CY 1999. Second, these states also had an increase in the total number of patients treated in CY 1999 which countered the national trend.

An interesting phenomenon can be observed in these two states during CY 1999. While the national average payment per-patient decreased by 32.2 percent, Alaska and New York actually realized greater per-patient reductions (-39.2% and -51.6% respectively), as seen in Appendix G-1.5. Both states' per-patient average payments of \$300 and \$381 were well below the national average of \$449. The increased payments in these states were obtained as a result of the increase in patient volume.

Appendix G-1.6 indicates that while the national average payment per-enrollee declined by 34.5 percent, Alaska saw increased payments of 0.4 percent and New York increased by 1.2 percent per-enrollee. While on the surface the changes in these states may appear significant; it may also indicate a leveling of the paying field. Appendix G-1.5 indicates that the average annual per-enrollee payments for these states remained stable while the national average adjusted. In CY 1999, the national per-beneficiary average payment was \$37.43 while Alaska's was \$39.75 and New York's was \$37.62.

In contrast to states like Alaska and New York, states that had high ratios of institutional providers and/or had fewer enrollees receiving outpatient therapy services in CY 1999 experienced marked reductions in payments. Appendix G-1.4 highlights that these payment reductions were dramatic, as thirteen states experienced overall outpatient therapy payment reductions of greater than 50 percent (range -50.6% to -66.9%). They were (alphabetically) Arkansas, Colorado, District of Columbia, Indiana, Kansas, Louisiana, Massachusetts, Mississippi, Missouri, New Mexico, Oklahoma, South Carolina, and Tennessee. All thirteen states had fewer patients treated in CY 1999, and only two had a percent of enrollees receiving therapy services that was higher than the national average (*see Appendices G-1. and G-1.3*).

When these states were analyzed for average per-patient payments and average per-enrollee payments (*see Appendices G-1.5 and G-1.6*) additional trends were observed that varied by state. Eight of these thirteen states had average per-patient payments that were below the national average in CY 1998 and remained lower in CY 1999. Two other states

had higher average per-patient payments in CY 1998 that became lower than average in CY 1999. An example of this from Appendix G-1.5 is Missouri. The average per-patient payment declined from \$1,320 in CY 1998 to \$452 in CY 1999. Across all states, the range in average per-patient payments reduced markedly from CY 1998 (\$1,463 in Maine to \$217 in North Dakota) to CY 1999 (\$835 in Texas to \$173 in North Dakota) highlighting the impact of standardizing payments to a fee schedule.

All thirteen states that had marked declines in total outpatient therapy payments also experienced reduced average payments per-enrollee. In CY 1998, ten of these states had average per-enrollee payments above the national average, indicating that the decline in CY 1999 was primarily movement towards the CY 1999 national average of \$37.43 per-enrollee. States such as Louisiana (\$112.93 in CY 1998 to \$40.65 in CY 1999) and Mississippi (\$109.16 in CY 1998 to \$35.85 in CY 1999) highlight this trend. However, states such as Arkansas were below the national average in CY 1998 and dropped further below the national average per-enrollee payment to \$21.43 in CY 1999. Similar to the reduced range in per-patient payment averages, the variance of the average per-enrollee payments also declined (\$112.93 in Louisiana to \$12.81 in Puerto Rico) in CY 1998 to (\$64.53 in Texas to \$12.31 in the U.S. Virgin Islands) in CY 1999.

By CY 2000, with the triple effects of annual increases to the fee schedule, suspension of the outpatient therapy caps, and an increase in the number of outpatient therapy patients treated, outpatient therapy payments increased by 35.7 percent nationally as compared to CY 1999. However, the net change in total payments from CY 1998 to CY 2000 was a net 10.3 percent reduction in overall payments.

Despite this two-year net reduction in payments nationally by CY 2000, twelve states actually received net increases in payments (range 0.7% to 33.9%). They were (alphabetically) Alaska, Arizona, Delaware, Hawaii, Maine, New Jersey, New York, Oregon, Puerto Rico, South Dakota, Utah and Vermont (*see Appendix G-1.4*). Comparative analysis of the changes in the number of outpatient therapy patients treated, the percentage of enrollees treated, the average per-patient payments, and the average per-enrollee payments from CY 1999 to CY 2000 was conducted similar to that described for CY 1998 to CY 1999 (*see Appendix G*). The increases in these states from CY 1999 to CY 2000 correlate principally with an increase in payments to institutional providers no longer subject to the caps, who traditionally treated higher cost patients (SNFs, CORFs, and ORFs). An additional increase resulted from the increased value of the fee schedule and an increase in the total number of patients treated.

Appendix G-1.4 demonstrates that ten states maintained total outpatient therapy payments in CY 2000 that were more than 40 percent less than they received in CY 1998 (range – 40.4 to -155.6%). They were (alphabetically) Colorado, District of Columbia, Kansas, Louisiana, Massachusetts, Mississippi, Missouri, Montana, New Mexico, and Oklahoma. These declines were principally driven by reduced payments to institutional providers due to the fee schedule, and were also linked to a high institutional provider ratio in these states, and/or a decline in the number of patients treated.

These findings indicate that there were within-state variations in total outpatient therapy payments, average per-patient payments, and average per-enrollee payments across the three-years under study, which mostly can be correlated with payment policy changes that occurred at the same time. These findings also suggest that there was not a single factor that could be used independently to identify aberrant geographic pattern changes. During a period of multiple payment policy changes, a combined analysis of the total payments, number of patients treated, average payment per-patient and average payment per-enrollee is necessary to identify any unusual patterns or changes.

However, one finding from this within-state payment analysis is clear. While the degree of disparity between states decreased from CY 1998 to CY 2000, there were a remarkable number of states that experienced significant payment reductions in CY 1999 that remained significant in CY 2000. This highlights that the imposition of the fee schedule on institutional providers in CY 1999 leveled the payment playing field, and had a direct and long-lasting effect on the total amounts paid and on the geographic distribution of outpatient therapy payments.

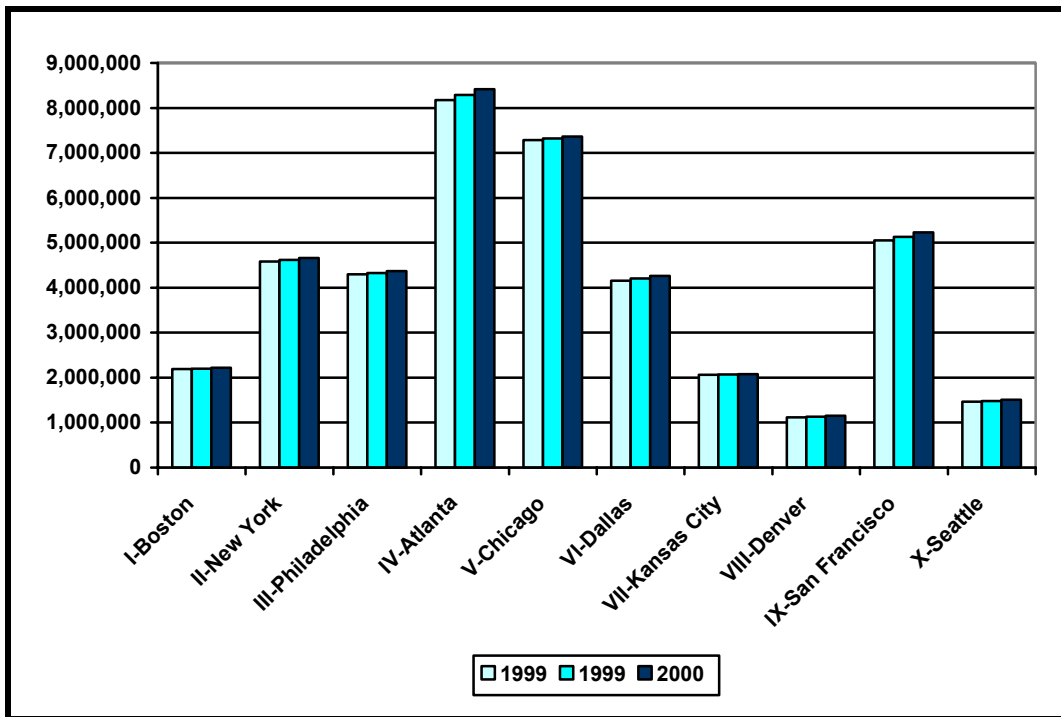
5.5 Utilization Analysis by Region

Analysis of the utilization of outpatient therapy services by CMS Region of residence does not result in the detail of the state-to-state variations described in section 5.4 of this report, however several interesting trends were identified. These are consistent with state patterns, and indicate that the outpatient therapy utilization and payments varied at a regional level.

5.5.1 Medicare Enrollees by Region

Appendix A-6 indicates that the national number of Medicare enrollees increased nationally across the three years under study, and similar increases occurred across all CMS regions. As figure 26 highlights, there were no changes in the relative rankings between regions.

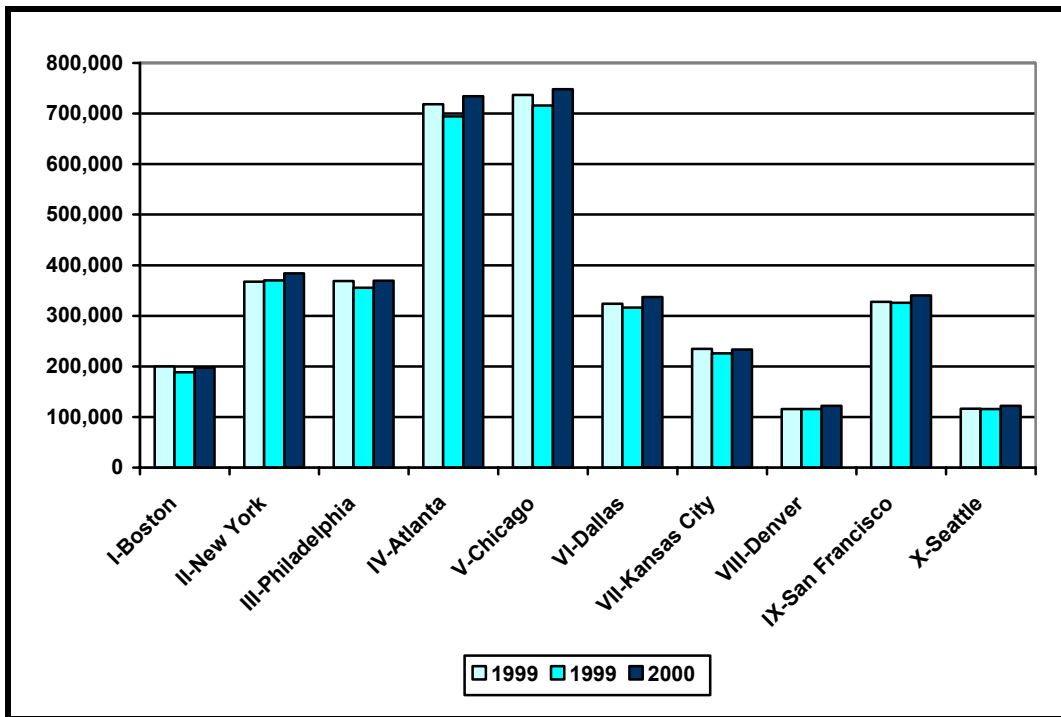
Figure 26. Medicare Enrollees by CMS Region



5.5.2 Annual Number of Patients by Region

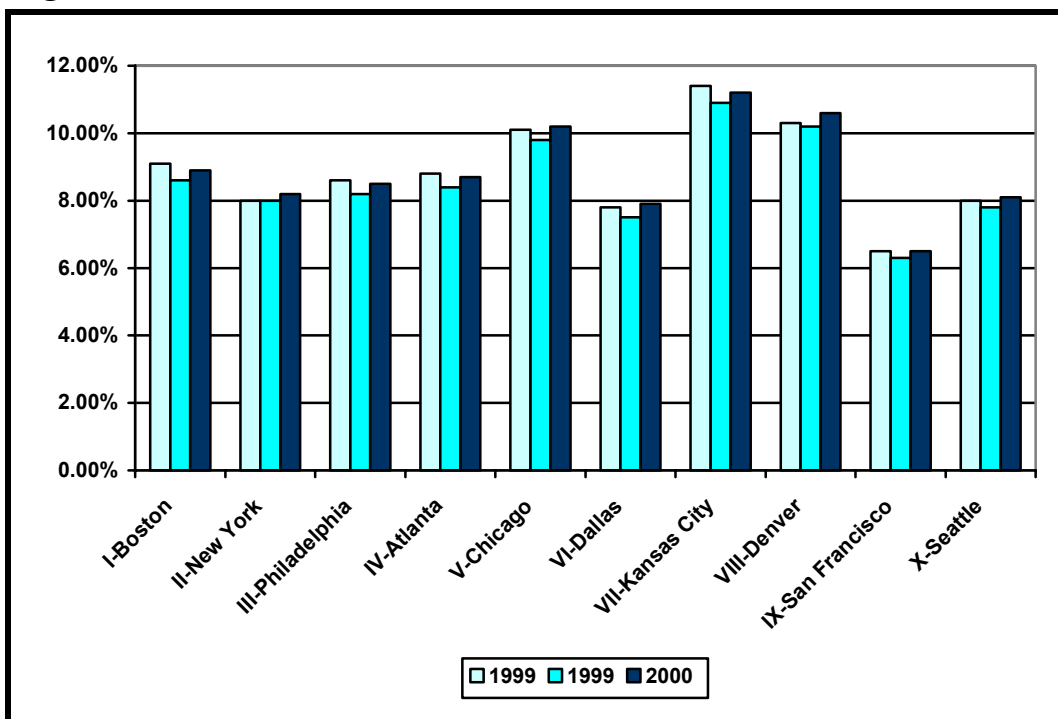
As Appendix H-1.2 indicates, while the number of patients receiving outpatient therapy services declined nationally by 2.5 percent in CY 1999, two regions (II-New York and VIII-Denver) had an increase in patients treated. As Appendices H-2.2 and H-3.2 highlight, all regions had fewer patients being treated by institutional providers while several had increased numbers treated in noninstitutional settings. Therefore, these two regions had increased noninstitutional provider activity. In CY 2000, all regions saw increases in the total number of outpatient therapy patients, which were relatively consistent with national trends. The year-to-year change in the number of outpatient therapy patients by region is illustrated in Figure 27 below.

Figure 27. Outpatient Therapy Patients by CMS Region



When considering the percent of enrollees that received outpatient therapy services in any region, there are no remarkable year-to-year changes that are inconsistent with national trends. As identified in Appendix H-1.3, the relative ranking of all regions remained identical from CY 1998 to CY 2000. Those regions that had higher than the national rate (e.g., VII- Kansas City's 11.2% in CY 2000) remained higher than the 8.6 percent national average, and those below (e.g., IX-San Francisco's 6.5% in CY 2000) remained lower. This study's findings indicate that CMS regional statistics may be less sensitive indicators of changes in utilization patterns than the state level analyses. However, the regional analysis largely eliminates the confounding factor of border crossing. Figure 28 highlights the regional differences in the rates of enrollees receiving outpatient therapy services.

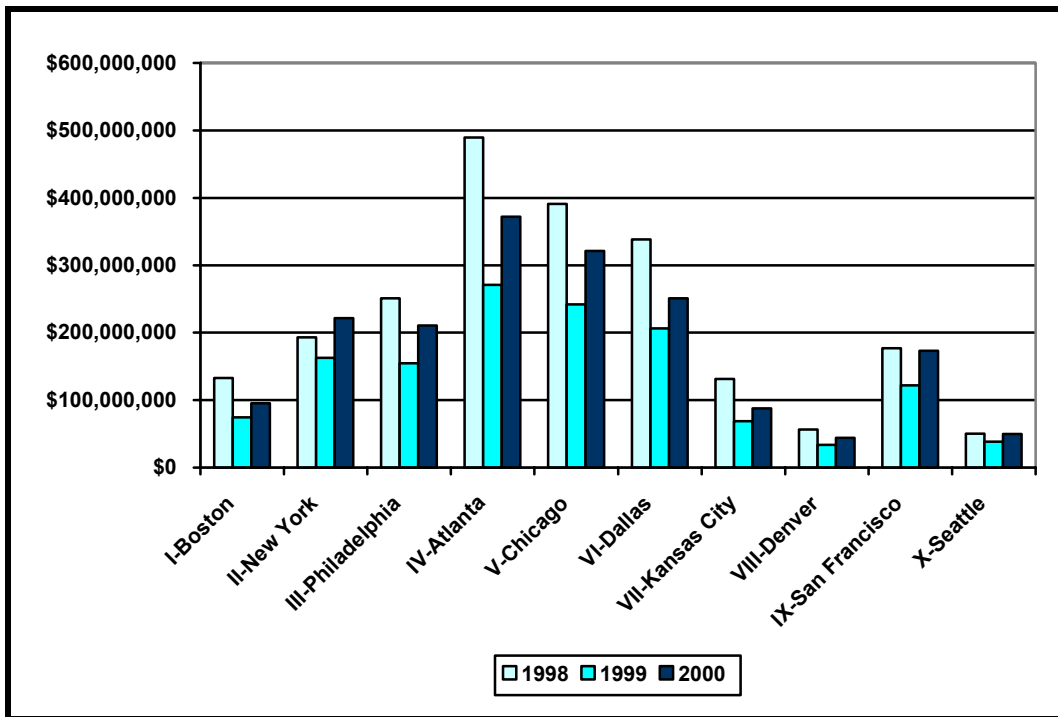
Figure 28. Percent of Enrollees Receiving Outpatient Therapy Services by CMS Region



5.5.3 Annual Payments by Region

Similar to the total patient counts, the total payments by CMS region findings are not as sensitive as the state-specific utilization analysis in identifying geographic variations. However, these numbers are useful in identifying potential trends among clusters of states. Figure 29 below highlights the year-to-year trends in payment changes by CMS region.

Figure 29. Total Outpatient Therapy Payments by CMS Region



From CY 1998 to CY 1999, most CMS regions experienced rates of payment reductions that were similar to the national average of a 33.9 percent reduction in payments (*see Appendix H-1.4*). The exception was region II-New York, which realized a decline in payments of 15.6 percent. When examining the institutional provider payments in Appendix H-2.4, and noninstitutional provider total payments in Appendix H-3.4, it is clear that region II had a nearly 50:50 ratio of institutional to noninstitutional payments, while the other regions were predominately biased towards institutional providers. This is consistent with the findings in other sections of this report that total payment reductions in CY 1999 were driven by institutional provider settings. With regard to CMS regions, Region II-New York, had a higher proportion of noninstitutional providers, and was less affected by reduced payments to institutions.

Another interesting observation found in Appendix H-3.4 is that in CY 1999, region VI-Texas saw an increase in total payments to noninstitutional providers of 156.4 percent. While this appears alarming initially, further analysis of the total payments for region VI (*see Appendix H-1.4*) indicates that overall, this region saw payment reductions of 39.1 percent. Therefore region VI-Dallas actually saw payment reductions greater than the national rate of 33.9 percent. The total payment reductions to the institutional providers in region VI, which are found in Appendix H-2.4, indicate that the increased payments to noninstitutional providers were more than offset by the 59.9 percent payment reductions to institutional providers during the same year. This could indicate that there was a shift in the therapy treatments from institutions to noninstitutional providers in CY 1999. Review of Appendices H-2.2 and H-3.2 support this hypothesis, as institutional settings treated

thirteen thousand fewer patients in region VI in CY 1999 while non-institutions saw an increase of 9,000 patients during the same period.

Additional analysis by CMS region of the average per-patient annual payments and per-enrollee average annual payments (*see Appendices H-1.5 and H-1.6*) reveal trends similar to the state analysis. Essentially, from CY 1998 to CY 2000, there was a reduction in payments per-patient and per-enrollee in CY 1999, and these increased in CY 2000, but not to the CY 1998 levels. Also, there were variations in these average payments between regions that, although smaller in degree in CY 2000, remain notable. For example, in CY 1998, the average annual per-patient payment in region VI-Dallas, was \$1,045 compared to \$432 in region X-Seattle. By CY 2000, region VI remained the region with the highest average payment, and region X remained the lowest, but the average payment difference reduced to \$744 and \$409 respectively. The results are summarized in Figures 30 and 31.

Figure 30. Average Annual Per-Patient Therapy Payments by CMS Region

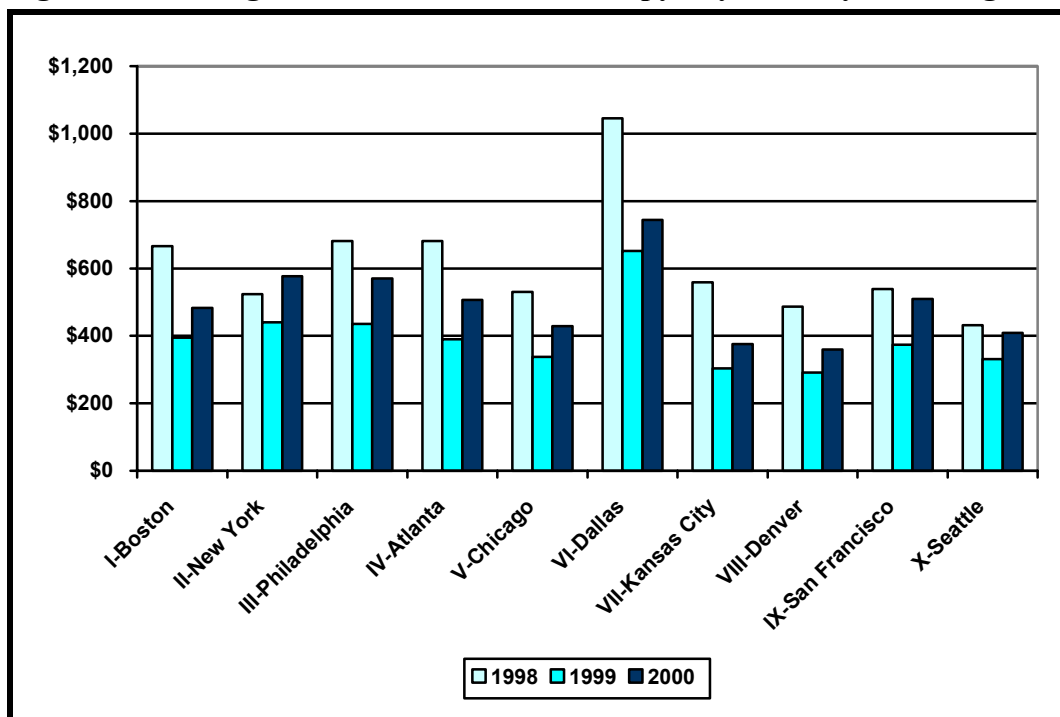
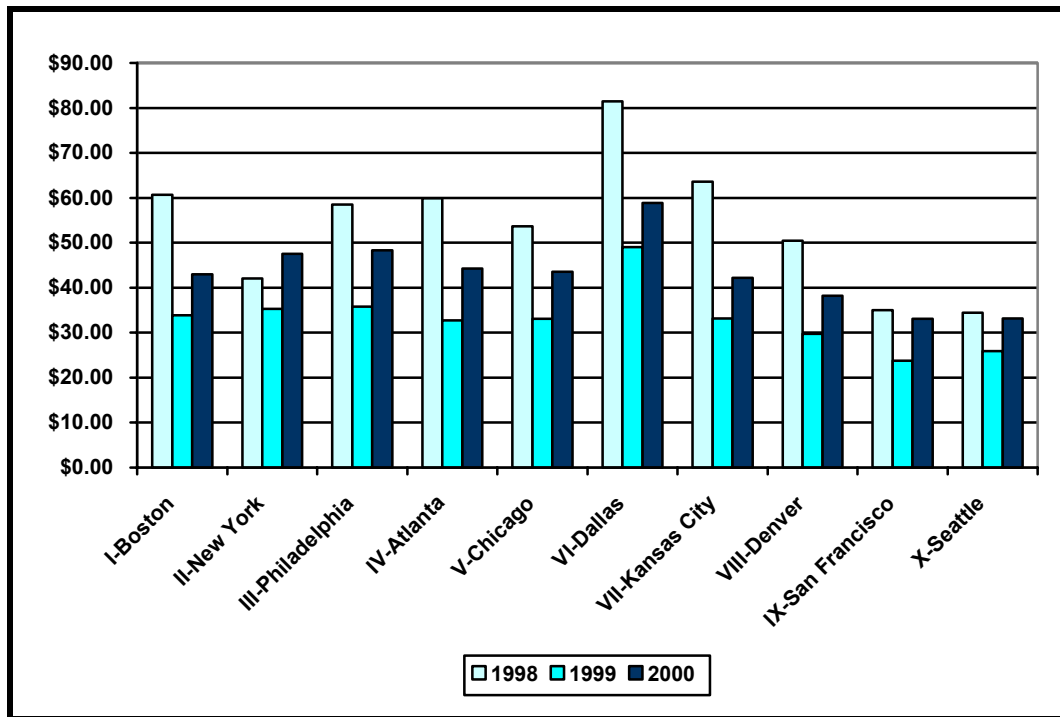


Figure 31. Average Annual Per-Enrollee Therapy Payments by CMS Region



5.6 Utilization Analysis by Calendar Month and Quarter

One hypothesis about the potential impact of the CY 1999 financial caps is that in a capped environment, utilization may have been depressed early in the year in anticipation of a need to use services later in the year. This would resemble a ‘rationing’ model, where services may have been delayed/avoided to protect the limited amount of available benefits. Another possibility is that utilization might accelerate at the end of the calendar year in anticipation of receiving a new allotted annual benefit amount. Such a ‘use-it-or-lose-it’ approach could be anticipated for beneficiaries or providers aware of capped payment methodologies.

A third hypothesis is that since an annual capped payment methodology limits the outpatient therapy services that beneficiaries can receive in a given year, it could be expected that utilization might decline at the end of the calendar year due to increasing numbers of individuals that surpassed the benefit limitations. This could be considered an ‘empty tank’ model. This particular phenomenon could be reflected by changes in overall utilization patterns with reductions in the number of outpatient therapy patients as the calendar year progressed.

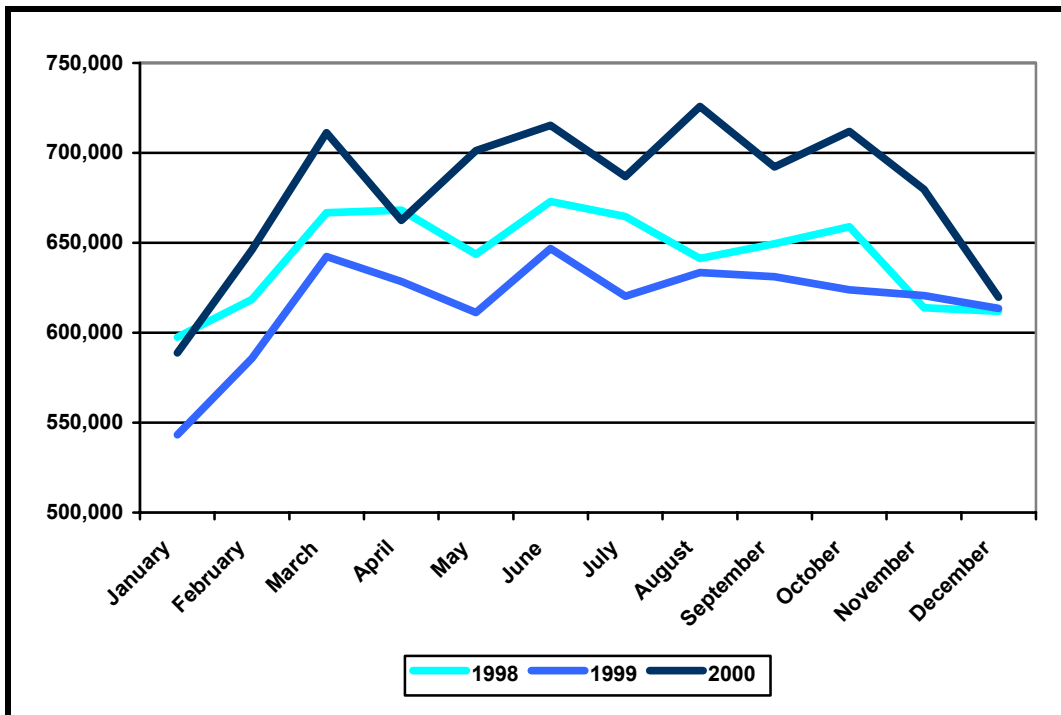
The following subsections describe the changes in utilization from CY 1998 to CY 2000 by calendar month and quarter. The source tables for this analysis are located in Appendices I and J of this report.

5.6.1 Number of Outpatient Therapy Patients by Month/Quarter

Across a calendar year, the volume of Medicare beneficiaries receiving outpatient therapy services is lower during the winter months of December, January and February. During the rest of the calendar year, the number fluctuates only minimally. Figure 32 highlights the patterns of patients receiving outpatient therapy services by calendar month across the three years under study. Overall, the number of patients was lowest in CY 1999, possibly supporting in part the ‘rationing’ model of behavior. The higher rate in CY 2000 is reflective of increased numbers of Medicare enrollees. This pattern is also consistent when institutional provider and noninstitutional provider settings are considered independently (see Appendices I-2.2 and I-3.2).

However, the temporal patterns of patients receiving outpatient therapy across the three years are consistent, indicating that neither the ‘rationing,’ ‘use-it-or-lose-it,’ or ‘empty tank’ models are supported as a national trend.

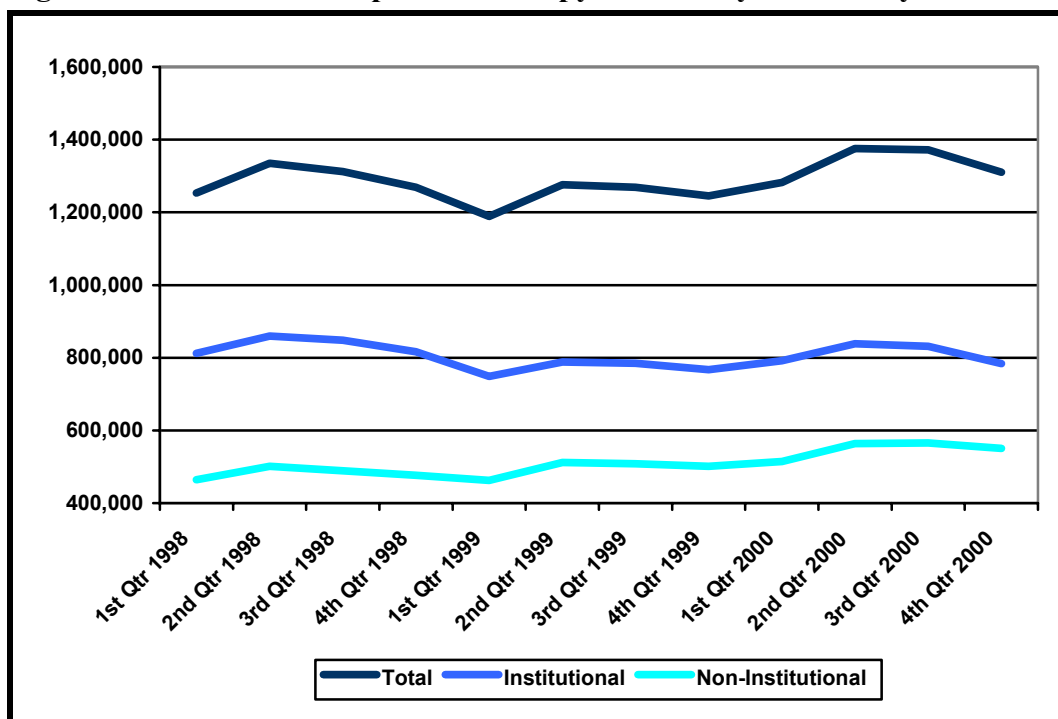
Figure 32. Number of Outpatient Therapy Patients by Month



Month-to-month changes in the numbers of patients receiving services may not be sensitive enough to identify unusual trends. Figure 33 tracks the temporal patterns of the total number of beneficiaries receiving outpatient therapy services, those receiving services from institutional providers, and those from noninstitutional providers. What is remarkable is the lack of significant fluctuation in the patterns of patients receiving outpatient therapy services across each year. However, as Appendices J-1.2, J-2.2, and J-3.2 highlight, while the overall number of patients decreased in CY 1999, the major decline occurred during the first quarter, supporting the ‘rationing’ hypothesis at this time

as both the beneficiaries and providers attempted to sort out the impact of the fee schedule and caps. It is notable that during CY 1999 increases in the numbers of beneficiaries receiving outpatient therapy during the second, third and fourth quarters were found in noninstitutional settings.

Figure 33. Number of Outpatient Therapy Patients by Calendar-year Quarter

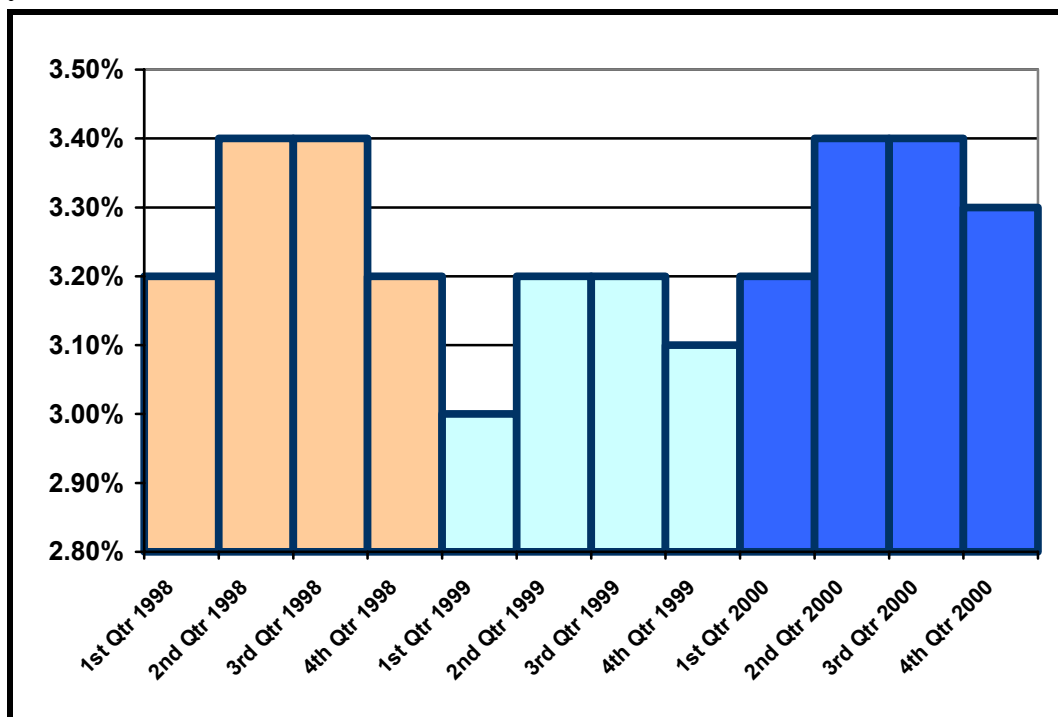


5.6.2 Percent of Enrollees Receiving Outpatient Therapy Services by Month/Quarter

Due to increases in the number of Medicare enrollees from CY 1998 to CY 2000, the actual number of patients receiving outpatient therapy services may not be as sensitive an indicator of the impact of payment policy changes upon utilization as the percent of enrollees that received outpatient therapy services. (See Appendices I-1.3, I-2.3, I-3.3 and J-1.3, J-2.3. and J-3.3.)

Figure 34 highlights the temporal pattern from CY 1998 to CY 2000 of the national rate of enrollees receiving outpatient therapy services. Most remarkable is that while there is a nearly identical pattern across the three years, a consistently lower percentage of enrollees received outpatient therapy services in CY 1999. **In other words, the peaks and valleys of utilization occurred in the same pattern across all three years, with CY 1998 and CY 2000 being nearly identical in volume as well. CY 1999 followed the same pattern, but with obviously reduced volume in the percent of enrollees receiving therapy.**

Figure 34. Percent of Enrollees Receiving Outpatient Therapy Services by Calendar-year Quarter



5.6.3 Total Outpatient Therapy Payments by Month/Quarter

The amount of total outpatient therapy payments per-calendar month and quarter also do not provide support for the ‘rationing,’ ‘use-it-or-lose-it,’ or ‘empty tank’ models. Payment reductions appeared instantaneously in January 1999 with the implementation of the fee schedule for institutions, and with the imposition of the caps on all settings (except hospital outpatient departments). Overall payments then increased immediately in January 2000 with the increases to the fee schedule and the suspension of the annual per-beneficiary caps (*see Appendices I-1.4 and J-1.4*). Figure 35 compares the relatively consistent total monthly payment patterns across the three years, and the only major difference is the dollar amount of payments. Figure 36 then compares the temporal changes in payments across the three years between institutional and noninstitutional providers as compared to total payments per calendar quarter. **This figure clearly demonstrates patterns reported elsewhere in this study. The CY 1999 payment reductions were realized from institutional providers affected by: 1) the new fee schedule that replaced cost report payment methodologies; and, 2) by reduced patient volume. Noninstitutional providers that were already on a fee schedule, saw increased payments that corresponded with: 1) increases in the fee schedule prices in CY 1999; and, 2) increases in patient volume.**

Figure 35. Total Outpatient Therapy Payments by Month

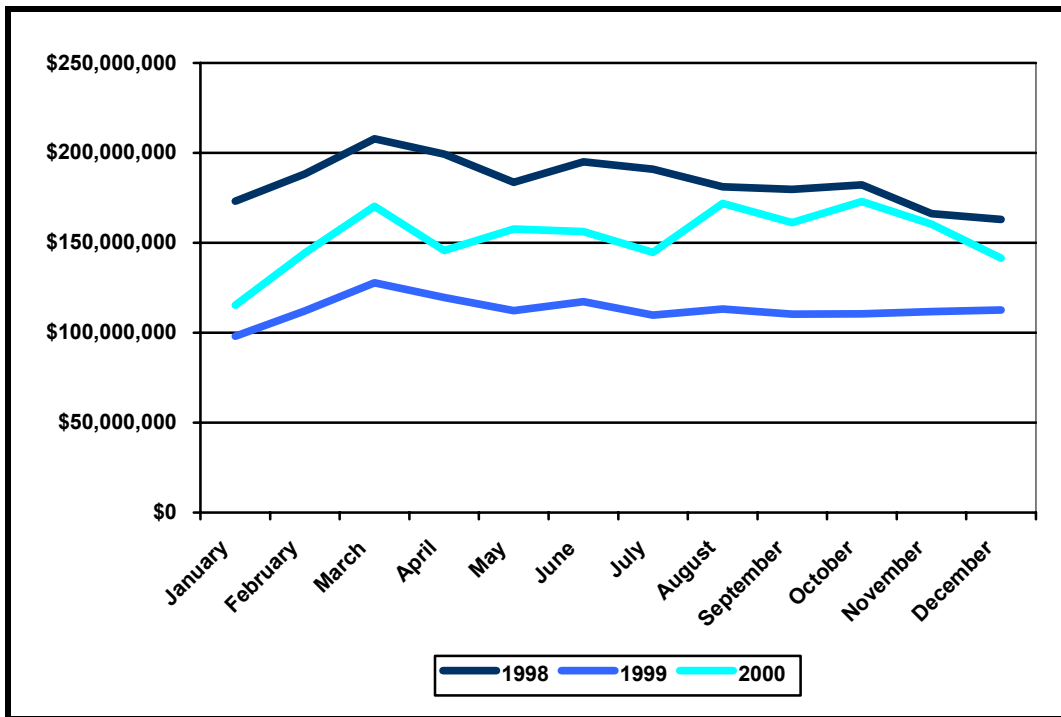
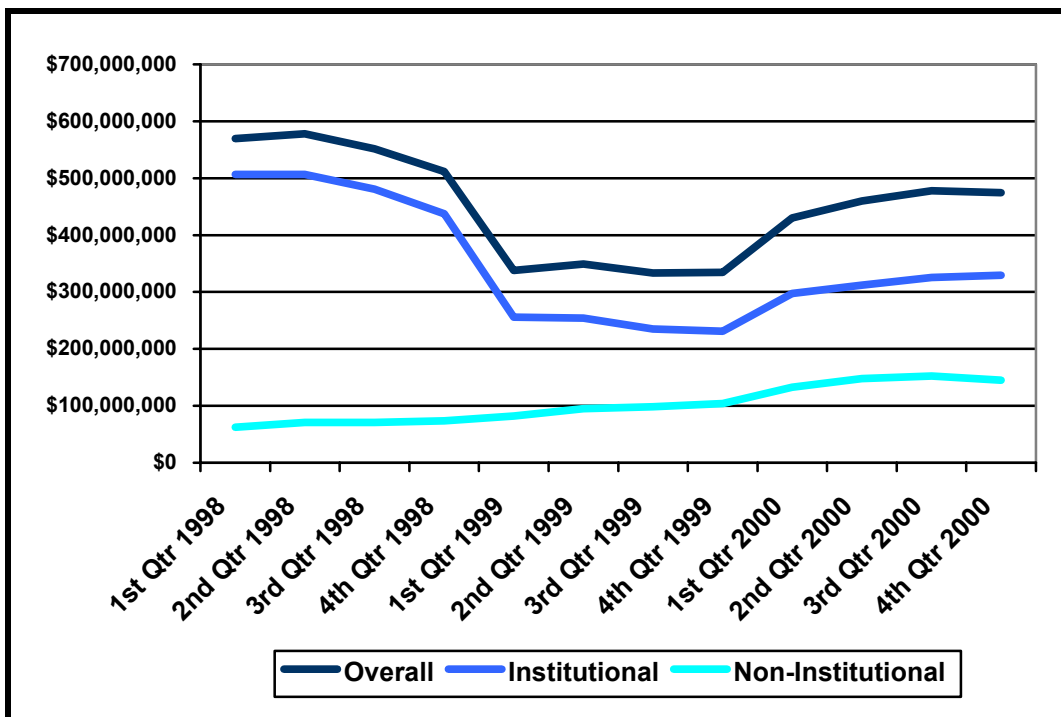


Figure 36. Total Outpatient Therapy Payments by Calendar-year Quarter



5.6.4 Average Per-Patient Payments by Month/Quarter

The average per-patient payment tables in Appendices I-1.6 and J-1.6 reveal patterns consistent with the overall payments just discussed. As Figures 37 and 38 below highlight, there are no remarkable temporal changes in payment patterns, other than the CY 1999 overall reductions that might suggest support for the ‘rationing,’ ‘use-it-or-lose-it,’ or ‘empty tank’ models.

There are several possible reasons why these patterns did not emerge in the per-patient payments over the course of CY 1999. First, if the number of patients who would have been affected by the caps was relatively small, national utilization statistics might not be sensitive enough to detect changes particular to a setting, geographic location, diagnosis, or other patient demographic. This study design did not permit analysis of services that were not furnished or were furnished and not billed to Medicare. Second, CMS implemented and enforced the caps by individual provider because of Y2K issues, which prevented the caps from being fully implemented. Therefore, those beneficiaries who required services exceeding the caps (except SNF residents) could merely transfer care to another provider. This situation most likely prevented the identification of whether the ‘empty tank’ model would occur if the caps had been enforced as intended. **The benchmark tables in Appendix M highlight that a small number of enrollees actually received outpatient therapy services totaling in the tens of thousands of dollars, even in CY 1999.** Third, the decision by Congress to place a moratorium on the caps for CY 2000 and CY 2001 (later extended through CY 2002) may have provided relief to beneficiaries in CY 1999 who may have been considering timing their need for outpatient therapy services (e.g. post-elective surgery rehabilitation). Such beneficiaries may have considered having surgery in late 1999 in order to benefit from their remaining CY 1999 cap allotment and the CY 2000 cap allotment to receive a full course of therapy. Without the caps in CY 2000, there was no longer the pressure to ‘use-it-or-lose-it,’ therefore, that pattern was not observed in this study.

Figure 37. Average Per-Patient Payments by Month

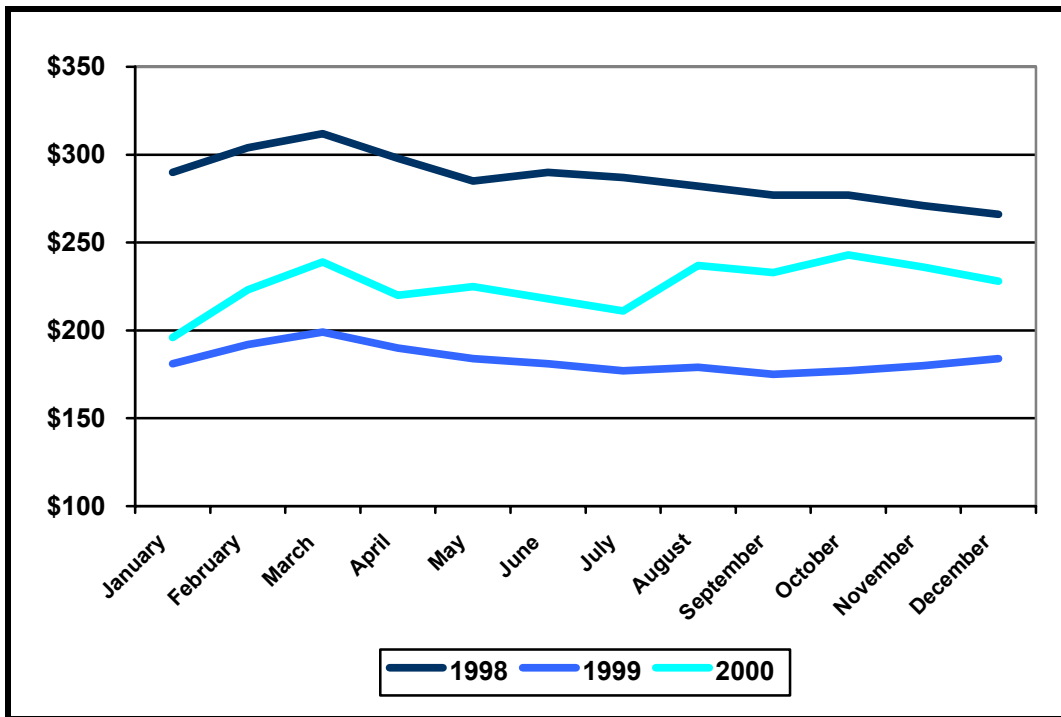
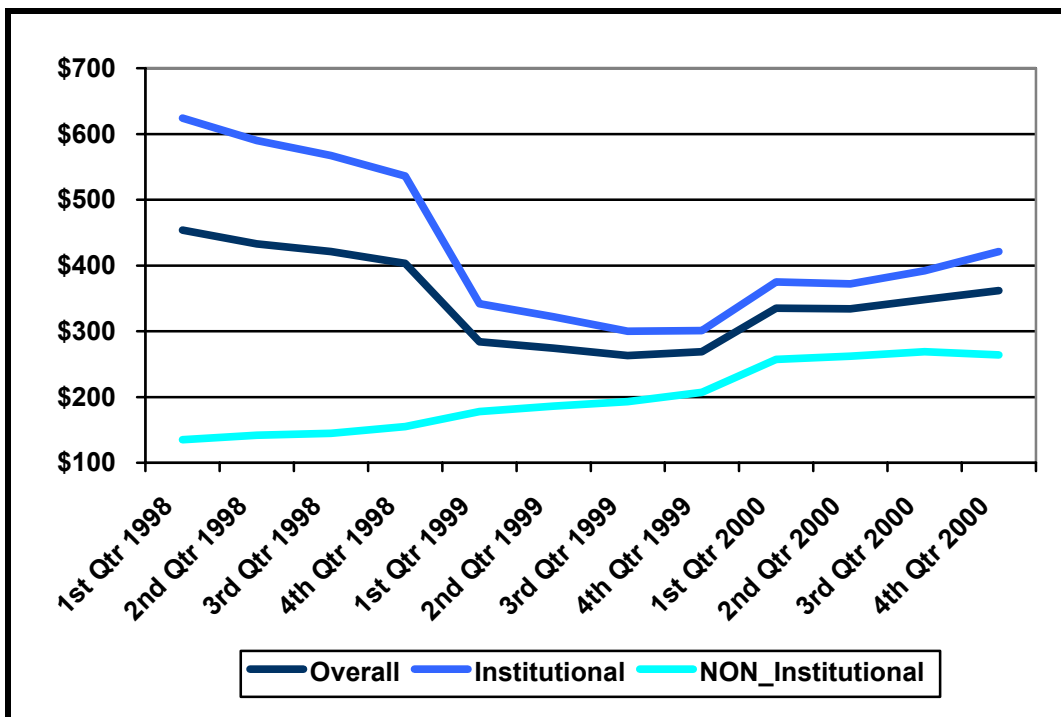


Figure 38. Average Per-Patient Payments by Calendar-year Quarter



5.7 Procedure and Claim Line Analysis

In addition to analyzing utilization of outpatient therapy services furnished to Medicare enrollees by type of therapy service and practice setting, useful information can be garnered by analyzing the utilization of individual HCPCS procedures that are considered to be outpatient therapy.

This report presents several appendices pertaining to an analysis of the utilization of HCPCS codes. Appendix K contains a list and descriptions of the HCPCS procedure codes identified as ‘always therapy.’ In order to save space elsewhere in this report, this Appendix is also to be used as a reference document to identify the definition of the HCPCS procedure codes listed in the other Appendices. **Appendix N contains the federal rates for the fee schedule from CY 1998 to CY 2001 for the ‘always therapy’ HCPCS, in order to identify temporal changes in the Medicare allowed charge per HCPCS unit, showing the escalation in rates for these procedures over the period under study.** A discussion of the fee-schedule is located in Section 3.1 of this report.

To assess differences in practice settings, several rank-order frequency lists of HCPCS procedure codes (and claim lines) billed from CY 1998 to CY 2000 by practice setting are shown in Appendix S. Further analyses were summarized in Appendix T for institutional providers, to assist in the identification of differences in practice patterns by the type of therapist (PT, SLP, or OT) furnishing the services within institutions. Finally, Appendix U also contains tables of ‘always therapy’ HCPCS contained on claims submitted by nonphysicians with the chiropractic specialty (#35).

5.7.1 Analysis of Claim HCPCS Unit and Claim Line Frequencies

This study has determined that historical comparisons of gross claim HCPCS units and/or claim line counts were invalid for utilization study purposes. Changes in payment policy and claims processing that occurred from CY 1998 to CY 2000 resulted in inconsistent units of measurement across the three years and across different provider types.

Prior to CY 1999, only noninstitutional providers were required to submit HCPCS codes by line item by date-of-service. In addition, these providers were required to use Level I HCPCS (otherwise known as CPT-4 procedure codes), as defined by the American Medical Association, which distinguished time-based procedures from service-based (untimed) procedures. Conversely, most institutions submitted claims that identified therapy revenue centers (e.g. 042x – physical therapy) followed by a total number of units, but the claims contained no specific procedure codes. The definition of a unit varied depending upon the provider and/or the fiscal intermediaries. In 1998, institutional providers began to phase in the use of HCPCS procedure codes, and line item date-of-service billing, but they were not required to implement the actual CPT definitions of time-based and service-based units until January 1, 1999.

Corresponding to these changes in claims reporting policies for institutional providers, there were remarkable changes in the frequency of HCPCS units and

claim lines submitted. Appendix O contains tables comparing the year-to-year changes in the gross frequency of outpatient therapy HCPCS units and lines on claims submitted by institutional and noninstitutional providers. The following finding is clear. **The standardization of claim HCPCS reporting requirements has resulted in more comparable results between institutional and noninstitutional providers in CY 2000 than in the prior two years. This should improve outpatient therapy utilization data analysis in the future.** For example, in CY 1998, institutional providers submitted an average 37.1 units per therapy claim line, while noninstitutional providers submitted only 1.2 units per claim line. By CY 2000 these numbers became more comparable as institutions reduced to 4.1 units per claim line, while non-institutions increased to 1.4 units per claim line. See Figures 39-41 for a summary of the changes in claim HCPCS units and claim lines.

Figure 39. Therapy Claim HCPCS Unit Frequencies (in Millions)

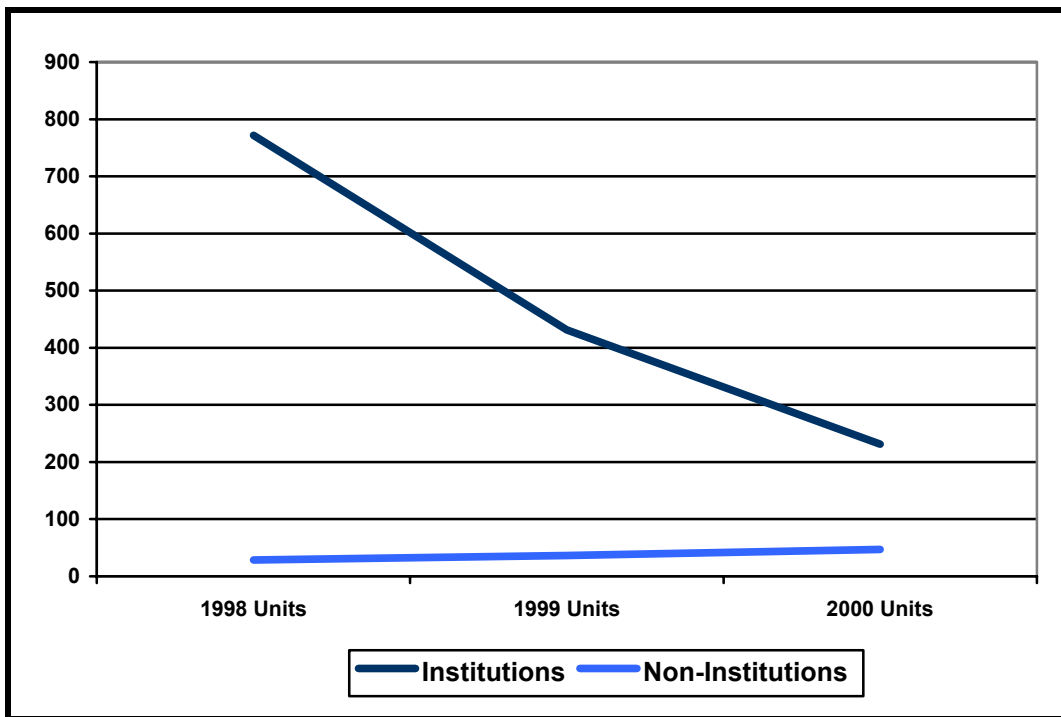


Figure 40. Therapy Claim HCPCS Line Frequencies (in Millions)

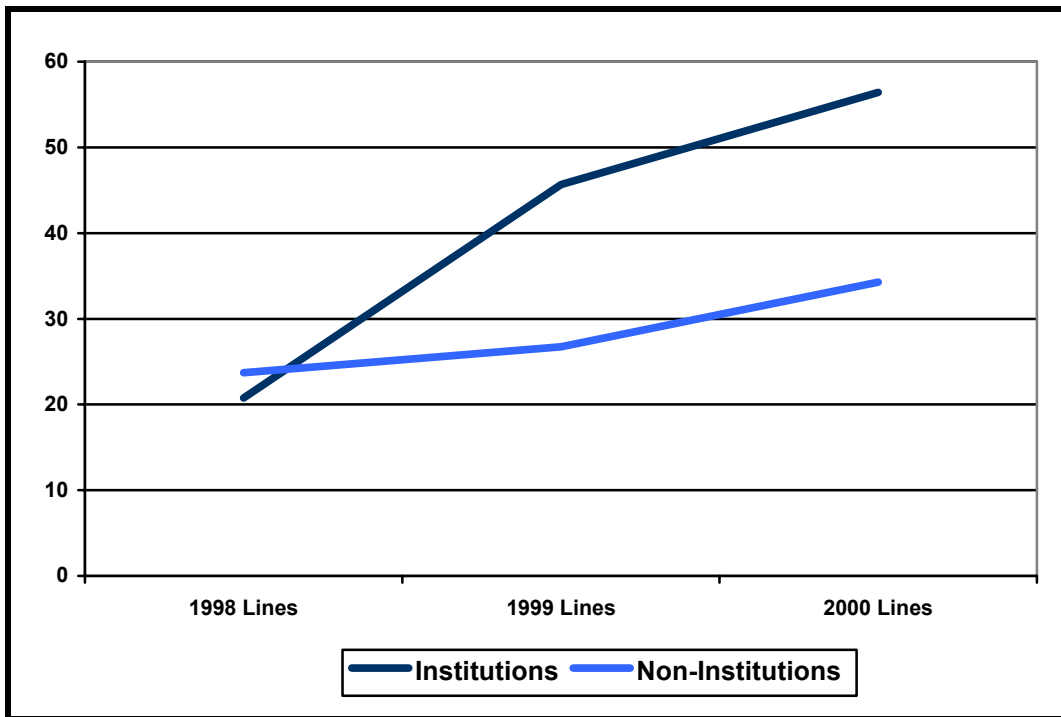
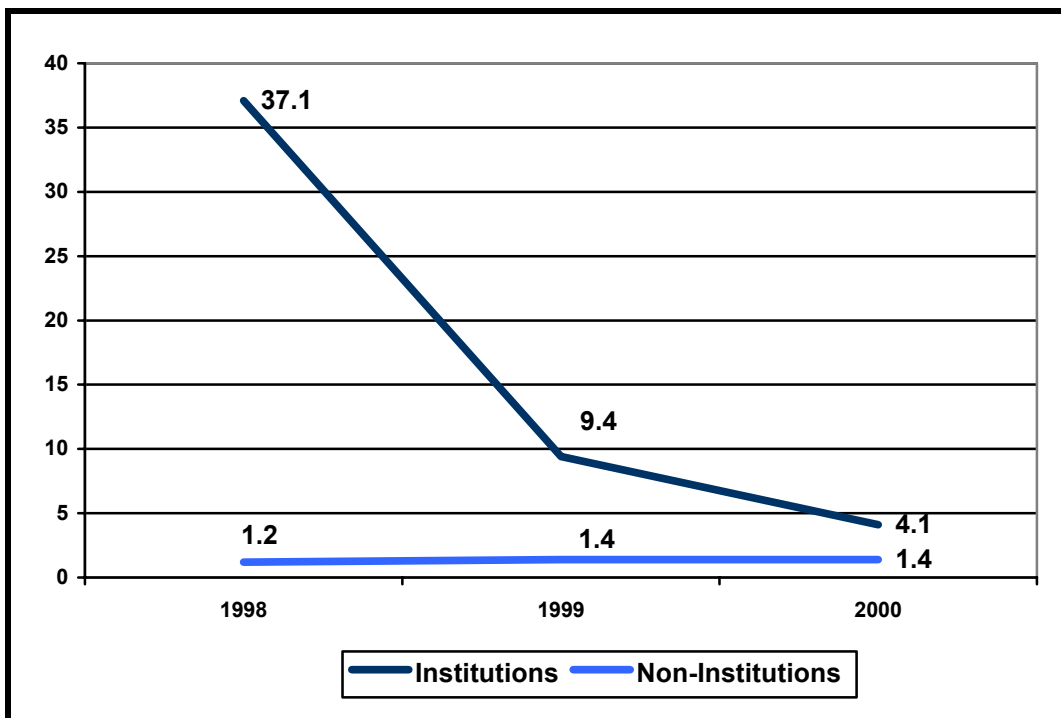


Figure 41. Therapy Claim HCPCS Units per Line



5.7.2 Analysis of Claim HCPCS Unit and Claim Lines Ranked by Frequency by Setting

The detail of the changes in the number of individual outpatient therapy claim HCPCS units and lines by setting in Appendix S provides an interesting look into the year-to-year changes in HCPCS reporting requirements, particularly with institutional providers. They also provide additional insight into the relative differences in the types of services furnished by different provider types. For example, Tables 18 and 19 below highlight the top five HCPCS procedures reported by all institutional providers in CY 1999 versus the top five reported in CY 2000. **It is clear that even with the improvements in standardizing the reporting of outpatient therapy HCPCS by line item date-of-service, the high rate for HCPCS 97035 (ultrasound) of 8.4 units per-line, and for 97113 (aquatic therapy) of 23.8 units per line in CY 2000 indicate potential utilization aberrancies, or ongoing issues with claims reporting or processing procedures.**

Table 18. CY 1998 Claim Level Analysis of Most Frequently Reported Line HCPCS (All Institutional Settings)

| HCPCS Unit Frequency Rank | HCPCS Code | HCPCS Units (N) | HCPCS Claim Lines (N) | Average HCPCS Units per Line (N) |
|---------------------------|------------|-----------------|-----------------------|----------------------------------|
| 1 st | 97110 | 191,025,122 | 4,489,506 | 42.5 |
| 2 nd | No Code | 93,700,665 | 2,307,317 | 40.6 |
| 3 rd | 97530 | 65,359,481 | 1,701,133 | 38.4 |
| 4 th | 97010 | 64,916,892 | 1,101,281 | 58.9 |
| 5 th | 97116 | 51,561,245 | 1,406,527 | 36.7 |

Table 19. CY 2000 Claim Level Analysis of Most Frequently Reported Line HCPCS (All Institutional Settings)

| HCPCS Unit Frequency Rank | HCPCS Code | HCPCS Units (N) | HCPCS Claim Lines (N) | Average HCPCS Units per Line (N) |
|---------------------------|------------|-----------------|-----------------------|----------------------------------|
| 1 st | 97110 | 71,030,264 | 17,250,128 | 4.1 |
| 2 nd | 97035 | 27,258,079 | 3,233,107 | 8.4 |
| 3 rd | 97530 | 22,280,792 | 6,457,769 | 3.5 |
| 4 th | 97116 | 19,179,384 | 5,620,695 | 3.4 |
| 5 th | 97113 | 14,143,377 | 595,459 | 23.8 |

During CY 2000 there are clear variations in the rankings and volumes of HCPCS procedures billed by institutional providers. The following Tables 20-24 highlight the top five HCPCS units billed by hospitals, SNFs, CORFs, ORFs (Rehab Agencies), and Other Institutions (HHAs, ASCs, etc). **What is notable is that institutional settings appear to have consistently higher HCPCS units per claim line than would be expected from line item date-of-service reporting requirements. This indicates potential claims reporting or claims processing aberrancies particular to those settings. Also of interest is that the aquatic therapy HCPCS code (97113) has an unexpected rate of units per claim line in both hospital and ORF (Rehab Agency) settings. As most other ORF procedures in Appendix S-3.5 have a low unit-to-line ratio, this could indicate either a potential utilization problem for this procedure or a claims reporting or processing aberrancy that may require further investigation by the intermediaries.**

Table 20. CY 2000 Claim Level Analysis of Most Frequently Reported Line HCPCS (Hospital (B) Setting)

| HCPCS Unit Frequency Rank | HCPCS Code | HCPCS Units (N) | HCPCS Claim Lines (N) | HCPCS Units per Line (N) |
|---------------------------|------------|-----------------|-----------------------|--------------------------|
| 1 st | 97110 | 25,197,205 | 6,942,930 | 3.6 |
| 2 nd | 97035 | 22,985,981 | 1,703,102 | 13.5 |
| 3 rd | 97113 | 11,331,850 | 358,160 | 31.6 |
| 4 th | 97770 | 8,149,321 | 66,189 | 123.1 |
| 5 th | 97014 | 7,959,259 | 868,954 | 9.2 |

Table 21. CY 2000 Claim Level Analysis of Most Frequently Reported Line HCPCS (SNF (B) Setting)

| HCPCS Unit Frequency Rank | HCPCS Code | HCPCS Units (N) | HCPCS Claim Lines (N) | HCPCS Units per Line (N) |
|---------------------------|------------|-----------------|-----------------------|--------------------------|
| 1 st | 97110 | 23,608,105 | 5,562,422 | 4.2 |
| 2 nd | 97530 | 14,293,617 | 3,250,104 | 4.4 |
| 3 rd | 97116 | 10,622,721 | 3,388,862 | 3.1 |
| 4 th | 97535 | 5,235,301 | 1,556,898 | 3.4 |
| 5 th | 97112 | 3,129,938 | 2,098,230 | 1.5 |

Table 22. CY 2000 Claim Level Analysis of Most Frequently Reported Line HCPCS (CORF (B) Setting)

| HCPCS Unit Frequency Rank | HCPCS Code | HCPCS Units (N) | HCPCS Claim Lines (N) | HCPCS Units per Line (N) |
|---------------------------|------------|-----------------|-----------------------|--------------------------|
| 1 st | 97110 | 1,527,697 | 769,716 | 2.0 |
| 2 nd | 97530 | 718,379 | 414,887 | 1.7 |
| 3 rd | 97116 | 492,872 | 319,379 | 1.5 |
| 4 th | 97112 | 474,279 | 277,397 | 1.7 |
| 5 th | 97535 | 358,444 | 225,664 | 1.6 |

Table 23. CY 2000 Claim Level Analysis of Most Frequently Reported Line HCPCS (ORF-Rehab Agency (B) Setting)

| HCPCS Unit Frequency Rank | HCPCS Code | HCPCS Units (N) | HCPCS Claim Lines (N) | HCPCS Units per Line (N) |
|---------------------------|------------|-----------------|-----------------------|--------------------------|
| 1 st | 97110 | 15,329,553 | 3,839,152 | 4.0 |
| 2 nd | 97140 | 2,928,067 | 1,399,522 | 2.1 |
| 3 rd | 97530 | 2,723,114 | 1,434,431 | 1.9 |
| 4 th | 97035 | 2,720,583 | 1,050,560 | 2.6 |
| 5 th | 97113 | 2,632,783 | 198,992 | 13.2 |

Table 24. CY 2000 Claim Level Analysis of Most Frequently Reported Line HCPCS (Other Institutional (B) Setting)

| HCPCS Unit Frequency Rank | HCPCS Code | HCPCS Units (N) | HCPCS Claim Lines (N) | HCPCS Units per Line (N) |
|---------------------------|------------|-----------------|-----------------------|--------------------------|
| 1 st | 97110 | 5,367,704 | 135,908 | 39.5 |
| 2 nd | 97116 | 4,121,473 | 41,215 | 100.0 |
| 3 rd | 97112 | 4,056,051 | 12,029 | 337.2 |
| 4 th | 97535 | 2,037,147 | 9,256 | 220.1 |
| 5 th | 97001 | 1,052,844 | 29,506 | 35.7 |

For noninstitutional providers, there was more stability in the number of HCPCS procedure units and claim lines billed from CY 1998 to CY 2000. Tables 25 and 26 below summarize the top five procedures billed by noninstitutional providers in CY 1998 and CY 2000. Because noninstitutional claims identify actual payments per claim line, this study is able to report this information. Institutional claims in the National Claims History file did not identify payments per individual line until October 2000; therefore that information was not available for the institutional provider HCPCS tables in this report.

Table 25. CY 1998 Claim Level Analysis of Most Frequently Reported Line HCPCS (All Noninstitutional Settings)

| HCPCS Unit Frequency Rank | HCPCS Code | HCPCS Units (N) | HCPCS Claim Lines (N) | HCPCS Units per Line (N) | Total Payments per HCPCS Procedure | Payments per HCPCS Unit |
|---------------------------|------------|-----------------|-----------------------|--------------------------|------------------------------------|-------------------------|
| 1 st | 97110 | 7,020,445 | 4,795,513 | 1.5 | \$90,051,881 | \$12.83 |
| 2 nd | 97035 | 3,733,491 | 3,327,473 | 1.1 | \$24,111,274 | \$6.46 |
| 3 rd | 97014 | 3,245,980 | 3,136,136 | 1.0 | \$18,909,088 | \$5.83 |
| 4 th | 97530 | 2,268,183 | 1,617,331 | 1.4 | \$29,007,108 | \$12.79 |
| 5 th | 97124 | 1,936,975 | 1,495,747 | 1.3 | \$16,796,493 | \$8.67 |

Table 26. CY 2000 Claim Level Analysis of Most Frequently Reported Line HCPCS (All Noninstitutional Settings)

| HCPCS Unit Frequency Rank | HCPCS Code | HCPCS Units (N) | HCPCS Claim Lines (N) | HCPCS Units per Line (N) | Total Payments per HCPCS Procedure | Payments per HCPCS Unit |
|---------------------------|------------|-----------------|-----------------------|--------------------------|------------------------------------|-------------------------|
| 1 st | 97110 | 13,709,841 | 8,137,710 | 1.7 | \$211,180,775 | \$15.40 |
| 2 nd | 97035 | 5,478,282 | 4,495,389 | 1.2 | \$40,574,562 | \$7.41 |
| 3 rd | 97140 | 4,685,441 | 3,638,500 | 1.3 | \$74,362,432 | \$15.87 |
| 4 th | 97014 | 4,196,509 | 4,115,123 | 1.0 | \$30,906,270 | \$7.36 |
| 5 th | 97530 | 3,821,947 | 2,555,070 | 1.5 | \$53,982,885 | \$14.12 |

The following tables further break down the ranking of the frequency of HCPCS units and lines by noninstitutional setting in CY 2000. They clearly indicate that the types of services furnished in these settings differ markedly. Physical therapists and occupational therapists in private practice more often furnish active therapeutic procedures that require one-to-one contact by the provider with the patient. Four of the top five physician office procedures do not require active patient participation, three are modalities, and the other is massage. In the nonphysician setting several remarkable findings are

observed. First, the top five procedures billed are all modalities that do not require active patient participation. Second, there is very little paid for these procedures. The tables in Appendix U were created to identify the source of this aberrancy. Drill down analysis in this setting revealed that many ‘always therapy’ HCPCS are being furnished by the chiropractic specialty (#35), and that carriers are properly denying payment for these procedures. Under Medicare payment policy, this specialty may only receive payment for chiropractic manipulations to correct spinal subluxations (HCPCS codes 98940-98943). Therefore, the low payment rate for HCPCS billed by noninstitutional providers in this study is an artifact from the inclusion of these unpaid (but ‘always therapy’) services.

Table 27. CY 2000 Claim Level Analysis of Most Frequently Reported Line HCPCS (PT Private Practice Setting)

| HCPCS Unit Frequency Rank | HCPCS Code | HCPCS Units (N) | HCPCS Claim Lines (N) | HCPCS Units per Line (N) | Total Payments per HCPCS Procedure | Payments per HCPCS Unit |
|---------------------------|------------|-----------------|-----------------------|--------------------------|------------------------------------|-------------------------|
| 1 st | 97110 | 8,161,534 | 4,988,763 | 1.6 | \$128,848,283 | \$15.79 |
| 2 nd | 97140 | 2,958,123 | 2,324,622 | 1.3 | \$51,033,826 | \$17.25 |
| 3 rd | 97530 | 2,274,738 | 1,597,823 | 1.4 | \$33,440,080 | \$14.70 |
| 4 th | 97035 | 2,023,772 | 1,923,631 | 1.1 | \$17,286,248 | \$8.54 |
| 5 th | 97014 | 1,527,980 | 1,500,036 | 1.0 | \$15,933,557 | \$10.43 |

Table 28. CY 2000 Claim Level Analysis of Most Frequently Reported Line HCPCS (OT Private Practice Setting)

| HCPCS Unit Frequency Rank | HCPCS Code | HCPCS Units (N) | HCPCS Claim Lines (N) | HCPCS Units per Line (N) | Total Payments per HCPCS Procedure | Payments per HCPCS Unit |
|---------------------------|------------|-----------------|-----------------------|--------------------------|------------------------------------|-------------------------|
| 1 st | 97110 | 343,878 | 191,616 | 1.8 | \$5,252,968 | \$15.28 |
| 2 nd | 97530 | 168,031 | 100,298 | 1.7 | \$2,422,961 | \$14.42 |
| 3 rd | 97535 | 99,614 | 49,274 | 2.0 | \$1,340,103 | \$13.45 |
| 4 th | 97140 | 83,457 | 58,059 | 1.4 | \$1,372,218 | \$16.44 |
| 5 th | 97112 | 62,158 | 38,958 | 1.6 | \$829,267 | \$13.34 |

Table 29. CY 2000 Claim Level Analysis of Most Frequently Reported Line HCPCS (Physician Setting)

| HCPCS Unit Frequency Rank | HCPCS Code | HCPCS Units (N) | HCPCS Claim Lines (N) | HCPCS Units per Line (N) | Total Payments per HCPCS Procedure | Payments per HCPCS Unit |
|---------------------------|------------|-----------------|-----------------------|--------------------------|------------------------------------|-------------------------|
| 1 st | 97110 | 5,049,189 | 2,867,021 | 1.8 | \$76,241,148 | \$15.10 |
| 2 nd | 97035 | 2,798,736 | 1,964,760 | 1.4 | \$22,683,915 | \$8.11 |
| 3 rd | 97124 | 2,324,780 | 1,302,060 | 1.8 | \$25,090,963 | \$10.79 |
| 4 th | 97032 | 1,763,500 | 921,804 | 1.9 | \$16,966,561 | \$9.62 |
| 5 th | 97014 | 1,407,612 | 1,383,754 | 1.0 | \$14,783,864 | \$10.50 |

Table 30. CY 2000 Claim Level Analysis of Most Frequently Reported Line HCPCS (Nonphysician Setting)

| HCPCS Unit Frequency Rank | HCPCS Code | HCPCS Units (N) | HCPCS Claim Lines (N) | Units per Line (N) | Total Payments per HCPCS Procedure | Payments per HCPCS Unit |
|---------------------------|------------|-----------------|-----------------------|--------------------|------------------------------------|-------------------------|
| 1 st | 97014 | 1,244,572 | 1,215,515 | 1.0 | \$28,915 | \$0.02 |
| 2 nd | 97035 | 614,058 | 570,255 | 1.1 | \$257,269 | \$0.42 |
| 3 rd | 97012 | 492,478 | 480,146 | 1.0 | \$57,381 | \$0.12 |
| 4 th | 97010 | 448,870 | 431,687 | 1.0 | \$0 | \$0.00 |
| 5 th | 97032 | 311,936 | 267,951 | 1.2 | \$383,682 | \$1.23 |

5.7.3 Analysis of Claim HCPCS Units and Claim Lines Ranked by Frequency by Institutional Provider Therapy Revenue Centers

Because the claims reporting requirements for institutional providers include all outpatient institutional services furnished to a patient, not just outpatient therapy services, and since there are often a combination of therapy specialists (PT, and/or SLP, and/or OT) treating a patient, this study conducted further analysis of institutional setting claims to identify the frequency of HCPCS procedure units and lines contained on institutional claims. Appendix T contains several tables that list these results from CY 1998 to CY 2000. The tables describe the most frequently reported procedures for all institutional therapy services, physical therapy services (revenue center 042x), speech-language pathology services (revenue center 044x), occupational therapy services (043x), and all other ‘always therapy’ HCPCS submitted in non-therapist revenue centers.

Similar to the findings in Section 5.7.2 above, which described HCPCS utilization trends by setting, there was a remarkable reduction of HCPCS units, and a corresponding increase in HCPCS lines reported from CY 1998 to CY 2000 in institutional settings. This corresponded with the new line item date-of-service reporting requirements. Tables in the prior section identified the changes that occurred with all institutions combined.

The following tables (31-34) highlight the top five most frequently reported HCPCS procedures in CY 2000 in institutional settings by type of therapy. **These results identify the significant differences that are present in the types of procedures furnished by the therapy specialties in institutional settings. They also identify that certain procedure codes remained problematic in CY 2000 with regard to the reported number of HCPCS units per claim line.** For example, in the physical therapy revenue center, code 97113 (aquatic therapy) has a unit per line (required to be per date of treatment) average of 24.1, and speech-language pathology code 92506 (an untimed procedure code) has a rate of 12.0 units per line.

Resolution of these aberrancies would be necessary prior before any study could use claim HCPCS units or line frequency numbers to compare utilization across provider settings or therapy types.

Table 31. CY 2000 Claim Level Analysis of Most Frequently Reported Line HCPCS (Institutional Revenue Center 042x – Physical Therapy)

| HCPCS Unit Frequency Rank | HCPCS Code | HCPCS Units (N) | HCPCS Claim Lines (N) | HCPCS Units per Line (N) |
|---------------------------|------------|-----------------|-----------------------|--------------------------|
| 1 st | 97110 | 58,570,749 | 14,426,588 | 4.1 |
| 2 nd | 97035 | 26,046,279 | 3,065,977 | 8.5 |
| 3 rd | 97116 | 19,156,009 | 5,610,794 | 3.4 |
| 4 th | 97113 | 14,122,384 | 586,705 | 24.1 |
| 5 th | 97014 | 10,333,079 | 1,879,081 | 5.5 |

Table 32. CY 2000 Claim Level Analysis of Most Frequently Reported Line HCPCS (Institutional Revenue Center 044x – Speech-Language Pathology)

| HCPCS Unit Frequency Rank | HCPCS Code | HCPCS Units (N) | HCPCS Claim Lines (N) | HCPCS Units per Line (N) |
|---------------------------|------------|-----------------|-----------------------|--------------------------|
| 1 st | 92507 | 1,546,507 | 782,922 | 2.0 |
| 2 nd | 92526 | 1,543,607 | 1,117,943 | 1.4 |
| 3 rd | 92506 | 1,177,841 | 97,780 | 12.0 |
| 4 th | 92525 | 825,449 | 277,229 | 3.0 |
| 5 th | 97770 | 205,357 | 101,322 | 2.0 |

Table 33. CY 2000 Claim Level Analysis of Most Frequently Reported Line HCPCS (Institutional Revenue Center 043x – Occupational Therapy)

| HCPCS Unit Frequency Rank | HCPCS Code | HCPCS Units (N) | HCPCS Claim Lines (N) | HCPCS Units per Line (N) |
|---------------------------|------------|-----------------|-----------------------|--------------------------|
| 1 st | 97530 | 12,991,757 | 2,332,107 | 5.6 |
| 2 nd | 97110 | 12,301,970 | 2,728,227 | 4.5 |
| 3 rd | 97535 | 8,488,139 | 2,109,568 | 4.0 |
| 4 th | 97770 | 8,266,313 | 161,871 | 51.1 |
| 5 th | 97003 | 2,888,443 | 553,177 | 5.2 |

Table 34. CY 2000 Claim Level Analysis of Most Frequently Reported Line HCPCS (Non-Therapist Institutional Revenue Centers)

| HCPCS Unit Frequency Rank | HCPCS Code | HCPCS Units (N) | HCPCS Claim Lines (N) | HCPCS Units per Line (N) |
|---------------------------|------------|-----------------|-----------------------|--------------------------|
| 1 st | 97035 | 1,000,387 | 360 | 2778.9 |
| 2 nd | 97110 | 43,811 | 16,203 | 2.7 |
| 3 rd | 97150 | 24,057 | 19,231 | 1.3 |
| 4 th | 97535 | 23,207 | 10,639 | 2.2 |
| 5 th | 97530 | 20,267 | 8,687 | 2.3 |

5.8 Analysis of Utilization by Beneficiary Diagnosis

Additional analyses were conducted to investigate the utilization of outpatient therapy services by patients with different medical conditions (diagnosis codes). To create a manageable list of diagnosis codes for analysis, this study analyzed the payment activity surrounding the principal claim diagnosis on all outpatient therapy claims. Therefore, provider coding errors and provider challenges related to the reporting of multiple co-

morbidities could have affected this report's findings. Additionally, this study analyzed the ICD-9 CM diagnoses to the third digit in specificity.

There are four appendices that contain utilization information by claim diagnosis, which attempt to identify patterns that may be important to consider in moving towards a condition-based alternative outpatient therapy payment system. First, Appendix L contains a reference list of 3-digit ICD-9 CM codes with their definitions. To save space, most other Appendices contain only the 3-digit code. The other Appendices containing claim diagnosis utilization analysis tables are P, W, and X.

5.8.1 Analysis of Utilization by Principal Claim Diagnoses During a Calendar Year

5.8.1.1 Analysis of Utilization of Part B Therapy Services Aggregated by Principal Claim Diagnosis Presented by Patients During a Calendar Year

Any analysis of patient condition using current National Claims History (NCH) claims data must address multiple factors to accurately describe utilization by diagnosis. In addition to the several challenges identified above, there are situations where a beneficiary generates claims that contain different principal claim diagnoses during the same clinical episode or during the same year due to co-morbidities, provider coding variations, and changes in medical condition, among others.

For example, a SNF patient may have a hip fracture (3-digit ICD-9 code 820) and dysphagia (3-digit ICD-9 code 787), and may be receiving both PT and SLP during the first month of an episode. During this first month, the facility may elect to use the ICD-9 code 820 as the principal claim diagnosis, although it also could have chosen code 787. During the second month, the patient might only receive SLP services, so the facility could accurately submit ICD-9 code 787 as the principal claim diagnosis. The result is that there are services and payments during this patient's one episode of care for two different claim diagnoses. Analysis that fails to address such situations would report deflated utilization numbers in the overall payments by diagnosis, since the procedures and payments for the first month would be assigned to diagnosis 820, and the second month to diagnosis 787.

In addition, any payment system that would include annual per-beneficiary payment limitations should consider the clinical conditions of those individuals who would most likely be impacted by such benefit limitations. As indicated above, current claim diagnoses may not accurately describe the annual therapy utilization of a beneficiary unless all claim diagnoses used for that patient are considered.

Using the previous example, if the patient received \$400 of SLP services in the first month when the claim diagnosis was 820, and received \$300 of SLP during the second month when the diagnosis was 787, and this was the only SLP the patient received during the calendar year, then the patient received a total of \$700 of SLP. However, failure to address situations of split diagnoses created by claim record limitations, or by different episodes during the calendar year would result in deflated utilization numbers by per-patient diagnosis. In this same example, without addressing the multiple diagnoses of this individual beneficiary, it could be reported that the average SLP annual payment for

diagnosis 820 was \$400, and \$300 for diagnosis 787. In actuality, the patient who presented with both a hip fracture *and* dysphagia as co-morbidities generated \$700 in annual payments. If a model addressed both claim principal diagnoses and the annual per-patient expenditures in its results, then the annual payment for this patient would be \$700 for ICD-9 code 820, and \$700 for diagnosis 787.

The tables in Appendix P demonstrate this type of analysis, which attempt to address some of the limitations noted. In this Appendix, all claims for individuals were identified by the principal diagnosis to the 3-digit specificity as described in Appendix L. If a patient presented with claims with different principal diagnoses at different times during a calendar year, the claim values of all claims for that individual were attributed to each diagnosis.

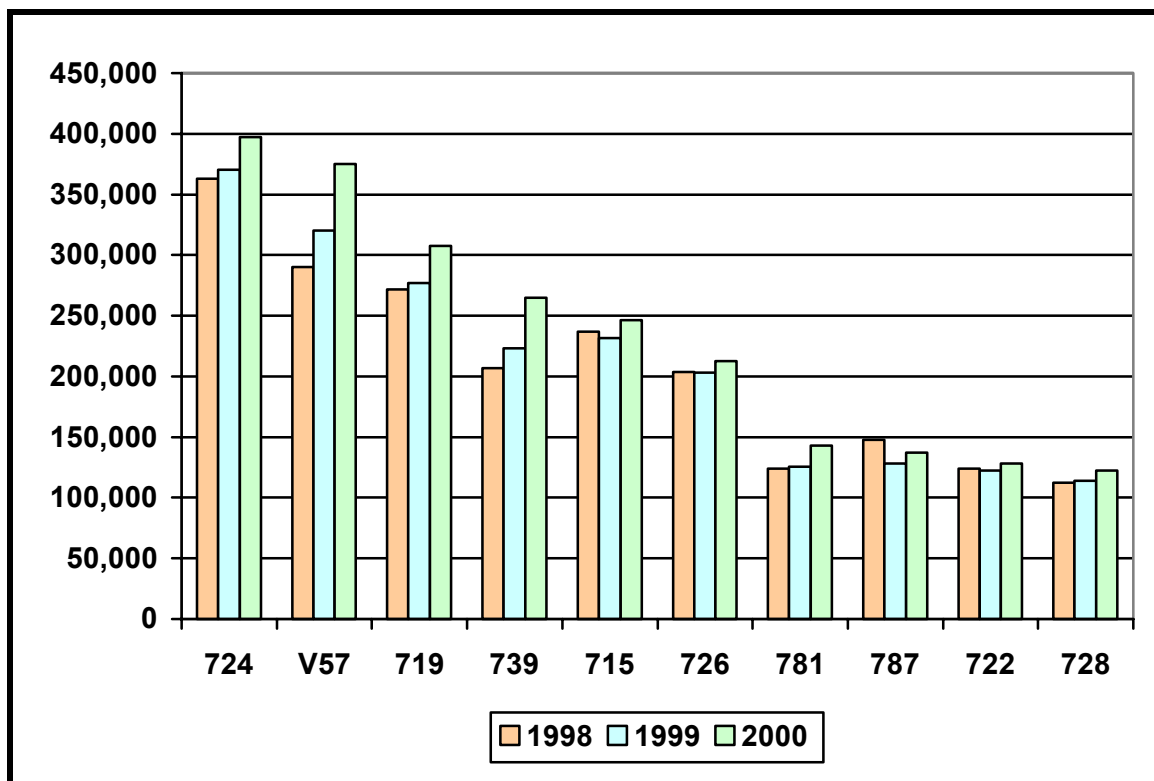
The tables in Appendix P identify several variables related to outpatient therapy utilization by patient diagnosis. Each 3-digit diagnosis table is presented in a rank-order manner of the top 53 diagnoses based upon annual patient volume, total Part B expenditures, and average per-patient expenditures. Additional tables provide similar information, but describe the utilization characteristics of only the most expensive patients - those in the top 5 percent and top 1 percent for any given year. Year-to-year trends from CY 1998 - CY 2000 for each diagnosis are also presented.

Additional analytic tables are provided by calendar year to identify variables such as the percent of all Part B therapy patients presenting with particular diagnoses, the percent of patients within a particular diagnosis that fall among the top 5 percent and 1 percent users, and the total annual payments attributed to the most expensive users with an individual diagnosis (*see section 5.8.4 for discussion of the top 5 percent and top 1 percent users by diagnosis*).

5.8.1.2 Trend of Part B Therapy Patient Volume Aggregated by Principal Claim Diagnoses Presented by Patients During a Calendar Year

Patients are more likely to receive outpatient therapy services for orthopedic conditions. As Figure 42 demonstrates, the most common condition was back disorders. Over ten percent of beneficiaries receiving outpatient therapy services presented with at least one claim containing ICD-9 code 724 as a principal diagnosis. This was followed by the generic V57 code (care involving rehabilitation procedures), most commonly used by hospitals. The majority of the top ten conditions were orthopedic.

Figure 42. Trend of Part B Therapy Patients Presenting With Specific 3-Digit Diagnosis Codes – Top Ten by Patient Volume³¹



In Appendix P-2.1.1, it is notable that in CY 1999, five diagnoses among the top 20 ranked by patient volume realized a reduction of patient volume of greater than ten percent. They were: 787 - digestive disorders including dysphagia (-13.2%); 780 - general symptoms (-13.5%); 436 - acute stroke (-15.3%); 839 - dislocations (-10.9); and 438 - late effects of stroke (-10.8%). Three other less frequently reported conditions saw declines in patient volume in CY 1999 of greater than 20 percent. They were: 707 - chronic ulcer of the skin (-21.7%); 784 - symptoms of head and neck (-25.3%); and 290 - psychosis (-27.8%). The percent decline in patient volume for these diagnoses is markedly greater than the 2.5 percent decline in the total number of patients treated in CY 1999. Most conditions realized increases in patient volume in CY 2000, but did not return to CY 1998 levels.

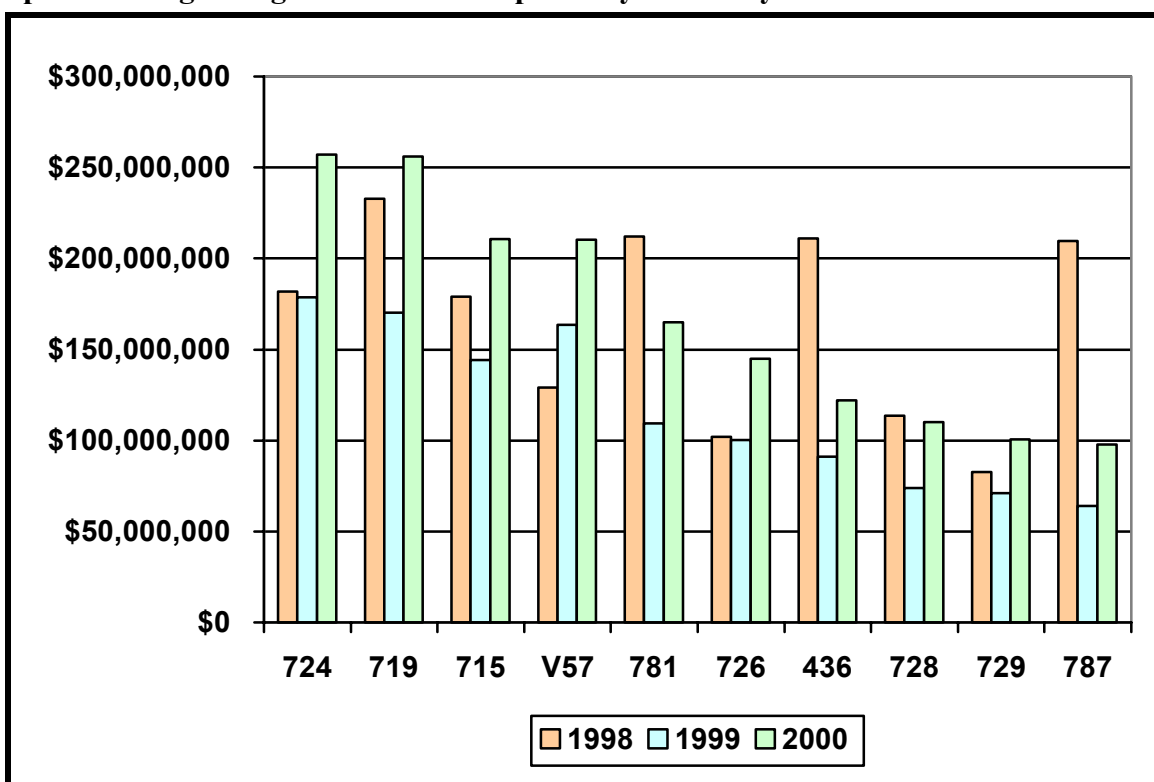
It is uncertain whether these changes can be attributed to real patient volume losses, changes in claim diagnosis-reporting procedures by providers, or differences in claim diagnosis-reporting procedures between providers. For example, in CY 1998 an ORF (rehabilitation agency) may have coded a patient as 436 (acute stroke). However, in CY 1999, as described in section 5.3 of this report, many such patients appeared to receive services in other settings. If that same patient received services in a hospital setting, they may have coded that patient as V57 (care involving rehabilitation procedures). Such coding variations between settings could have resulted in inflated increases for some diagnoses, and greater declines for others.

³¹ See Appendix L for Diagnosis Code Descriptions.

5.8.1.3 Trend of Part B Therapy Total Payments Aggregated by Principal Claim Diagnoses Presented by Patients During a Calendar Year

Changes in patient volume by diagnosis may provide only some of the information necessary when analyzing utilization changes or when considering an alternative payment system. Some conditions that are frequently reported may be relatively inexpensive to treat. Information that identifies the total annual cost associated with a diagnosis may provide additional clarification. The tables in Appendix P-2.1.2 highlight the ranked annual aggregate expenditures by diagnosis. **Consistent with the patient volume results, most outpatient therapy expenditures are attributed to orthopedic conditions.** As Figure 43 demonstrates, the condition generating the greatest total cost was back disorders (724), followed by other joint disorders (719), and osteoarthritis (715). The generic V57 code (care involving rehabilitation procedures) was ranked fourth in annual cost. When annual therapy payments were aggregated by patient, more than ten percent of the total outpatient therapy expenditures in CY 2000 were attributed to each of these four diagnoses.

Figure 43. Trend of Part B Therapy Total Payments for Patients Presenting With Specific 3-Digit Diagnosis Codes – Top Ten by Total Payments³²



It is notable that the year-to-year changes in total payments by diagnosis are influenced markedly by multiple factors. First, as stated in section 5.8.1.2, changes in patient volume

³² See Appendix L for diagnosis code descriptors.

will affect overall payments. Second, changes in payment policies from CY 1998 to CY 2000 clearly affected these results. Those conditions that were more frequently treated in SNF, CORF and ORF institutional settings, (which were impacted by both the institution of the fee schedule and the payment caps in CY 1999), clearly demonstrated marked reductions in total payments (*see section 5.8.2 for analysis of diagnosis variables by setting*). For example, total annual payments for symptoms involving nervous and musculoskeletal systems (code 781) declined by 48.4 percent in CY 1999, acute stroke (436) declined by 56.8 percent, and digestive disorders including dysphagia (787) declined by 69.4 percent. These declines were markedly greater than the average national per-diagnosis payment decline of 33.9 percent. The persistence of reduced payments for these diagnoses in CY 2000 relative to CY 1998 indicated a longer-lasting impact of the fee schedule on annual total payments by diagnosis.

In contrast, diagnoses commonly reported by hospitals (that were not subject to the caps in CY 1999), such as V57 - care involving rehabilitation procedures, saw increases in total payments of 26.5 percent. Also, orthopedic diagnoses more commonly treated by noninstitutional providers (that realized increases in the fee schedule in CY 1999) either saw increased total payments in CY 1999 or a smaller reduction in payments than the national rate. Nearly all diagnoses saw increased payments in CY 2000, with the increase in fee schedule rates and the suspension of the therapy caps. Again, those conditions more commonly treated in institutional settings were more likely to have reduced total payments in CY 2000 as compared to CY 1998 (*see Appendix P-2.1.2*).

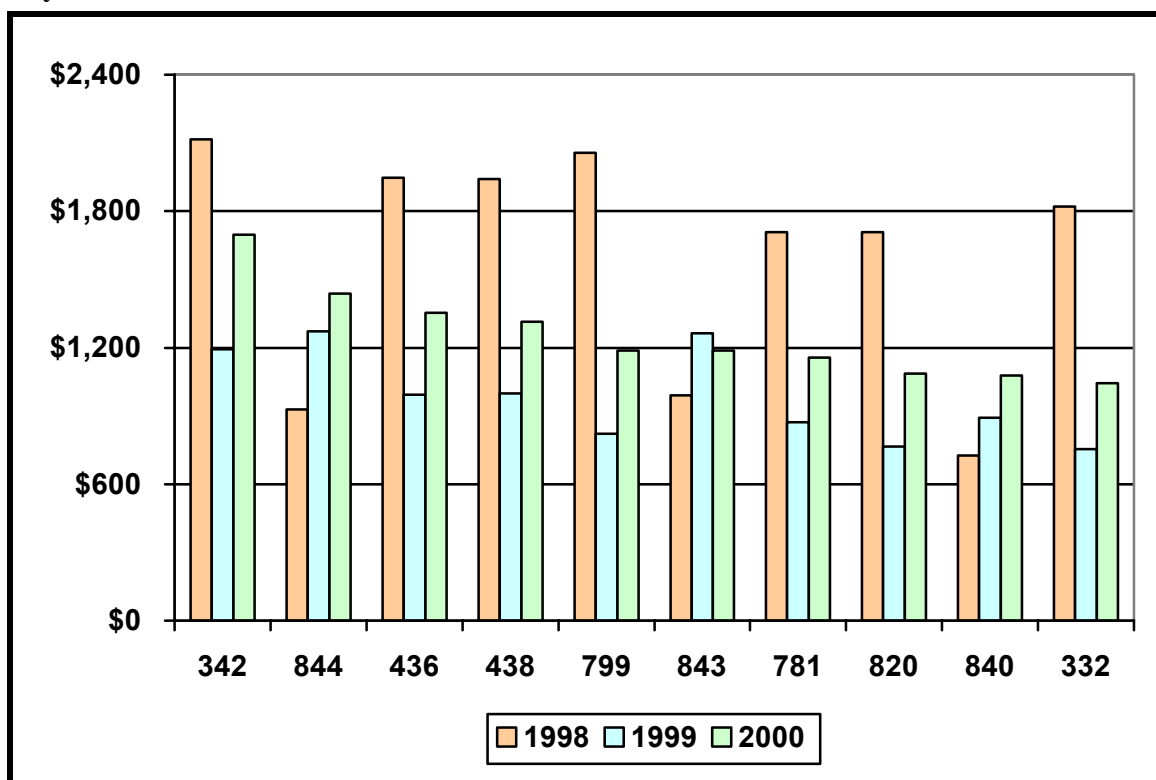
5.8.1.4 Trend of Part B Therapy Average Per-Patient Payments Aggregated by Principal Claim Diagnoses Presented by Patients During a Calendar Year

For a payment policy to consider patient clinical condition as demonstrated by diagnosis, the average annual per-patient cost may be a more precise indicator than the total patient volume or total cost per diagnosis. This is especially important when considering conditions such as Parkinson's disease (332), which may be expensive to treat, but which occurred less frequently. Conditions with a high average per-patient cost may be disproportionately impacted by annual per-patient payment limitations. Information that identifies the annual per-patient cost associated with a diagnosis is contained in Appendices P-2.1.3, P-3.1.3, P-4.1.3, and P-5.1.3. These tables highlight the ranked annual aggregate per-patient expenditures by diagnosis.

Unlike the patient volume and total cost by diagnosis information reported in the previous two sections, patients presenting with neurologic conditions at any time during a given year tend to generate higher per-patient expenditures than other conditions. These higher cost patients presented with conditions more commonly treated in institutional settings. As Figure 44 demonstrates, the condition generating the greatest per-patient cost in CY 2000 was hemiplegia and hemiparesis (342) at \$1,696. Other neurologic conditions in the top ten by average per-patient cost were: 436-acute stroke (3rd at \$1,353), 438-late effects stroke (4th at \$1,313), and 332-Parkinson's Disease (10th at \$1,044). These conditions, which were more frequently treated in institutional provider settings, saw marked reductions in per-patient payments in CY 1999, and a slight rebound in CY 2000,

consistent with findings in other sections of this report. Other costly conditions commonly treated by institutional providers also demonstrated per-patient payment declines in CY 1999 that were greater than the national average of 32.2 percent, such as: 799-ill-defined morbidity (5th at \$1,188); 781-symptoms involving nervous and musculoskeletal systems (7th at \$1,155); and 820-hip fracture (8th at \$1,085).

Figure 44. Trend of Part B Therapy Average Per-Patient Payments for Patients Presenting With Specific 3-Digit Diagnosis Codes – Top Ten by Average Per-Patient Payment³³



Conversely, orthopedic conditions more commonly treated in noninstitutional provider settings realized an overall increase in average per-patient payments across the three years, consistent with increases in the fee schedule across the three years and the suspension of the caps in CY 2000. For example, three of the CY 2000 top ten per-patient average cost orthopedic conditions that are commonly treated by non-institutional providers were not even in the top 20 in CY 1998. These were: 844- sprains and strains of knee and leg (2nd at \$1,437); 843-sprains and strains of hip and thigh (6th at \$1,186); and 840-sprains and strains of shoulder and upper arm (9th at \$1,077).

It is clear that the leveling of the payment playing field resulting from the application of the fee schedule to institutions, and the suspension of payment caps to non-institutional therapists in private practice has resulted in a redistribution of the most expensive conditions ranked by average per-beneficiary payments. Therefore, the

³³ See Appendix L for diagnosis code descriptors.

CY 2000 information, which represents a consistent national payment policy across all provider settings, most likely represents the truest picture of the average annual per-beneficiary cost by diagnosis, and could serve as a baseline for further study.

While it is important to consider the average per-patient annual cost by reported diagnosis as an indicator of what conditions might be impacted by policy that would include annual payment limitations, additional analysis could identify those individuals at the extreme of cost per-diagnosis. Section 5.8.4 provides such analysis of the top 5 percent and top 1 percent most costly patients by diagnosis. It also provides a clearer indicator of the percentage of patients with each diagnosis who are likely to be costly. In addition, the total payments attributed to the most expensive patients are identified. Sections 5.8.2 and 5.8.3 describe the patterns of claims generated by diagnosis by setting and institutional provider claim type variables.

5.8.2 Analysis of Most Frequently Reported Claim Diagnoses by Setting

The tables in Appendix X provide a variety of information related to outpatient therapy utilization by claim frequency ranking. The information presented includes the ranked diagnosis, the total number of claims, the total therapy payments, the total claim payments, and the percentage of the total claim payment that was attributed to therapy services. Additional tables reveal the payment totals for physical therapy, speech-language pathology, occupational therapy, and other therapy services for each listed diagnosis. Other analyses on the diagnoses by specialty and practice setting were included.

The following tables³⁴ (35-43) for CY 2000 highlight that there are noticeable differences in the medical conditions of patients receiving outpatient therapy services in different practice settings. Additionally, the relative payment by type of therapy service varied by diagnosis. Those patients with diagnoses that had higher rates of physical therapy and speech-language pathology combined, such as acute onset stroke (ICD-9 436) may be more vulnerable to combined caps than an orthopedic condition treated principally by physical therapy alone.

³⁴ See Appendix L for diagnosis code descriptors.

Table 35. CY 2000 Claim Level Analysis of Most Frequently Reported Claim Diagnoses (Hospital (B) Setting)

| Claim Frequency Rank | 3-Digit Principal Dx Code | Claims (N) | Total Therapy Paid (\$) | Total Claim Paid (\$) | Therapy Paid (\$) of Claim Paid (\$) |
|----------------------|---------------------------|---------------|-------------------------|-----------------------|--------------------------------------|
| 1st | V57 | 731,059 | \$151,040,093 | \$164,045,505 | 92.1% |
| 2nd | 724 | 211,914 | \$37,175,677 | \$41,800,731 | 88.9% |
| 3rd | 719 | 154,713 | \$30,207,645 | \$33,042,487 | 91.4% |
| 4th | 715 | 128,222 | \$23,937,039 | \$32,171,413 | 74.4% |
| 5th | 726 | 95,647 | \$16,392,382 | \$21,720,509 | 75.5% |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (\$) | SLP Paid (\$) | OT Paid (\$) | Other Therapy Paid (\$) |
| 1st | V57 | \$119,910,865 | \$7,714,284 | \$22,621,313 | \$793,632 |
| 2nd | 724 | \$36,333,526 | \$40,635 | \$701,352 | \$100,165 |
| 3rd | 719 | \$27,475,365 | \$158,555 | \$2,529,156 | \$44,569 |
| 4th | 715 | \$22,370,420 | \$29,186 | \$1,497,867 | \$39,566 |
| 5th | 726 | \$14,986,420 | \$15,734 | \$1,373,103 | \$17,125 |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (%) | SLP Paid (%) | OT Paid (%) | Other Therapy Paid (%) |
| 1st | V57 | 79.4% | 5.1% | 15.0% | 0.5% |
| 2nd | 724 | 97.7% | 0.1% | 1.9% | 0.3% |
| 3rd | 719 | 91.0% | 0.5% | 8.4% | 0.1% |
| 4th | 715 | 93.5% | 0.1% | 6.3% | 0.2% |
| 5th | 726 | 91.4% | 0.1% | 8.4% | 0.1% |

Table 36. CY 2000 Claim Level Analysis of Most Frequently Reported Claim Diagnoses (SNF (B) Setting)

| Claim Frequency Rank | 3-Digit Principal Dx Code | Claims (N) | Total Therapy Paid (\$) | Total Claim Paid (\$) | Therapy Paid (\$) of Claim Paid (\$) |
|----------------------|---------------------------|--------------|-------------------------|-----------------------|--------------------------------------|
| 1st | 781 | 116,523 | \$38,798,885 | \$45,049,908 | 86.1% |
| 2nd | 719 | 95,454 | \$33,105,682 | \$38,642,549 | 85.7% |
| 3rd | 787 | 92,675 | \$26,895,100 | \$28,927,314 | 93.0% |
| 4th | 436 | 84,967 | \$31,837,521 | \$38,458,231 | 82.8% |
| 5th | 780 | 82,757 | \$29,515,514 | \$34,297,259 | 86.1% |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (\$) | SLP Paid (\$) | OT Paid (\$) | Other Therapy Paid (\$) |
| 1st | 781 | \$25,833,629 | \$1,972,549 | \$10,988,990 | \$3,716 |
| 2nd | 719 | \$24,600,575 | \$1,265,553 | \$7,235,740 | \$3,813 |
| 3rd | 787 | \$2,464,637 | \$22,215,684 | \$2,200,718 | \$14,060 |
| 4th | 436 | \$13,771,088 | \$7,042,152 | \$11,019,123 | \$5,157 |
| 5th | 780 | \$15,918,220 | \$2,116,898 | \$11,478,487 | \$1,910 |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (%) | SLP Paid (%) | OT Paid (%) | Other Therapy Paid (%) |
| 1st | 781 | 66.6% | 5.1% | 28.3% | 0.0% |
| 2nd | 719 | 74.3% | 3.8% | 21.9% | 0.0% |
| 3rd | 787 | 9.2% | 82.6% | 8.2% | 0.1% |
| 4th | 436 | 43.3% | 22.1% | 34.6% | 0.0% |
| 5th | 780 | 53.9% | 7.2% | 38.9% | 0.0% |

Table 37. CY 2000 Claim Level Analysis of Most Frequently Reported Claim Diagnoses (CORF (B) Setting)

| Claim Frequency Rank | 3-Digit Principal Dx Code | Claims (N) | Total Therapy Paid (\$) | Total Claim Paid (\$) | Therapy Paid (\$) of Claim Paid (\$) |
|----------------------|---------------------------|--------------|-------------------------|-----------------------|--------------------------------------|
| 1st | 724 | 29,188 | \$8,169,041 | \$9,372,681 | 87.2% |
| 2nd | 781 | 28,834 | \$10,384,467 | \$11,566,601 | 89.8% |
| 3rd | 715 | 27,714 | \$8,291,288 | \$9,406,280 | 88.1% |
| 4th | 719 | 18,667 | \$5,049,119 | \$5,382,096 | 93.8% |
| 5th | 726 | 17,847 | \$4,621,613 | \$5,304,037 | 87.1% |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (\$) | SLP Paid (\$) | OT Paid (\$) | Other Therapy Paid (\$) |
| 1st | 724 | \$6,568,765 | \$5,668 | \$1,593,974 | \$633 |
| 2nd | 781 | \$7,322,535 | \$104,327 | \$2,955,048 | \$2,556 |
| 3rd | 715 | \$6,020,478 | \$56,124 | \$2,179,061 | \$35,626 |
| 4th | 719 | \$3,936,128 | \$21,021 | \$1,091,929 | \$40 |
| 5th | 726 | \$3,022,661 | \$1,186 | \$1,597,581 | \$185 |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (%) | SLP Paid (%) | OT Paid (%) | Other Therapy Paid (%) |
| 1st | 724 | 80.4% | 0.1% | 19.5% | 0.0% |
| 2nd | 781 | 70.5% | 1.0% | 28.5% | 0.0% |
| 3rd | 715 | 72.6% | 0.7% | 26.3% | 0.4% |
| 4th | 719 | 78.0% | 0.4% | 21.6% | 0.0% |
| 5th | 726 | 65.4% | 0.0% | 34.6% | 0.0% |

Table 38. CY 2000 Claim Level Analysis of Most Frequently Reported Claim Diagnoses (ORF-Rehab Agency (B) Setting)

| Claim Frequency Rank | 3-Digit Principal Dx Code | Claims (N) | Total Therapy Paid (\$) | Total Claim Paid (\$) | Therapy Paid (\$) of Claim Paid (\$) |
|----------------------|---------------------------|--------------|-------------------------|-----------------------|--------------------------------------|
| 1st | 724 | 163,036 | \$35,723,866 | \$36,624,567 | 97.5% |
| 2nd | 719 | 121,766 | \$28,414,732 | \$29,392,305 | 96.7% |
| 3rd | 715 | 103,391 | \$27,458,906 | \$28,574,562 | 96.1% |
| 4th | 726 | 102,422 | \$22,524,012 | \$23,058,855 | 97.7% |
| 5th | 781 | 54,538 | \$15,505,509 | \$16,359,271 | 94.8% |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (\$) | SLP Paid (\$) | OT Paid (\$) | Other Therapy Paid (\$) |
| 1st | 724 | \$34,760,587 | \$8,106 | \$946,971 | \$8,202 |
| 2nd | 719 | \$26,352,961 | \$92,579 | \$1,966,410 | \$2,782 |
| 3rd | 715 | \$24,877,466 | \$56,973 | \$2,522,269 | \$2,197 |
| 4th | 726 | \$21,133,785 | \$3,439 | \$1,382,544 | \$4,244 |
| 5th | 781 | \$12,944,794 | \$154,940 | \$2,405,607 | \$168 |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (%) | SLP Paid (%) | OT Paid (%) | Other Therapy Paid (%) |
| 1st | 724 | 97.3% | 0.0% | 2.7% | 0.0% |
| 2nd | 719 | 92.7% | 0.3% | 6.9% | 0.0% |
| 3rd | 715 | 90.6% | 0.2% | 9.2% | 0.0% |
| 4th | 726 | 93.8% | 0.0% | 6.1% | 0.0% |
| 5th | 781 | 83.5% | 1.0% | 15.5% | 0.0% |

Table 39. CY 2000 Claim Level Analysis of Most Frequently Reported Claim Diagnoses (Other Institution (B) Setting)

| Claim Frequency Rank | 3-Digit Principal Dx Code | Claims (N) | Total Therapy Paid (\$) | Total Claim Paid (\$) | Therapy Paid (\$) of Claim Paid (\$) |
|----------------------|---------------------------|--------------|-------------------------|-----------------------|--------------------------------------|
| 1st | V57 | 15,196 | \$2,506,457 | \$2,800,914 | 89.5% |
| 2nd | 724 | 4,232 | \$639,748 | \$886,879 | 72.1% |
| 3rd | 717 | 3,994 | \$48,815 | \$3,226,538 | 1.5% |
| 4th | 715 | 3,881 | \$228,116 | \$1,616,038 | 14.1% |
| 5th | 726 | 3,788 | \$179,946 | \$2,365,666 | 7.6% |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (\$) | SLP Paid (\$) | OT Paid (\$) | Other Therapy Paid (\$) |
| 1st | V57 | \$2,085,200 | \$149,489 | \$247,449 | \$24,318 |
| 2nd | 724 | \$626,651 | \$285 | \$11,499 | \$1,314 |
| 3rd | 717 | \$48,360 | \$0 | \$290 | \$166 |
| 4th | 715 | \$208,431 | \$436 | \$14,372 | \$4,877 |
| 5th | 726 | \$171,410 | \$0 | \$8,259 | \$277 |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (%) | SLP Paid (%) | OT Paid (%) | Other Therapy Paid (%) |
| 1st | V57 | 83.2% | 6.0% | 9.9% | 1.0% |
| 2nd | 724 | 98.0% | 0.0% | 1.8% | 0.2% |
| 3rd | 717 | 99.1% | 0.0% | 0.6% | 0.3% |
| 4th | 715 | 91.4% | 0.2% | 6.3% | 2.1% |
| 5th | 726 | 95.3% | 0.0% | 4.6% | 0.2% |

Table 40. CY 2000 Claim Level Analysis of Most Frequently Reported Claim Diagnoses (PT Private Practice (B) Setting)

| Claim Frequency Rank | 3-Digit Principal Dx Code | Claims (N) | Total Therapy Paid (\$) | Total Claim Paid (\$) | Therapy Paid (\$) of Claim Paid (\$) |
|----------------------|---------------------------|--------------|-------------------------|-----------------------|--------------------------------------|
| 1st | 724 | 626,082 | \$46,511,721 | \$46,511,721 | 100% |
| 2nd | 719 | 446,910 | \$33,598,479 | \$33,598,479 | 100% |
| 3rd | 726 | 377,181 | \$28,023,254 | \$28,023,254 | 100% |
| 4th | 715 | 338,540 | \$27,479,074 | \$27,479,074 | 100% |
| 5th | 722 | 216,818 | \$15,816,655 | \$15,816,655 | 100% |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (\$) | SLP Paid (\$) | OT Paid (\$) | Other Therapy Paid (\$) |
| 1st | 724 | \$46,511,721 | \$0 | \$0 | \$0 |
| 2nd | 719 | \$33,598,479 | \$0 | \$0 | \$0 |
| 3rd | 726 | \$28,023,254 | \$0 | \$0 | \$0 |
| 4th | 715 | \$27,479,074 | \$0 | \$0 | \$0 |
| 5th | 722 | \$15,816,655 | \$0 | \$0 | \$0 |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (%) | SLP Paid (%) | OT Paid (%) | Other Therapy Paid (%) |
| 1st | 724 | 100% | 0% | 0% | 0% |
| 2nd | 719 | 100% | 0% | 0% | 0% |
| 3rd | 726 | 100% | 0% | 0% | 0% |
| 4th | 715 | 100% | 0% | 0% | 0% |
| 5th | 722 | 100% | 0% | 0% | 0% |

Table 41. CY 2000 Claim Level Analysis of Most Frequently Reported Claim Diagnoses (OT Private Practice (B) Setting)

| Claim Frequency Rank | 3-Digit Principal Dx Code | Claims (N) | Total Therapy Paid (\$) | Total Claim Paid (\$) | Therapy Paid (\$) of Claim Paid (\$) |
|----------------------|---------------------------|--------------|-------------------------|-----------------------|--------------------------------------|
| 1st | 813 | 16,432 | \$1,280,305 | \$1,280,305 | 100% |
| 2nd | 719 | 14,151 | \$1,056,966 | \$1,056,966 | 100% |
| 3rd | 715 | 14,111 | \$1,309,900 | \$1,309,900 | 100% |
| 4th | 354 | 12,853 | \$855,502 | \$855,502 | 100% |
| 5th | 728 | 11,737 | \$1,060,379 | \$1,060,379 | 100% |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (\$) | SLP Paid (\$) | OT Paid (\$) | Other Therapy Paid (\$) |
| 1st | 813 | \$0 | \$0 | \$1,280,305 | \$0 |
| 2nd | 719 | \$0 | \$0 | \$1,056,966 | \$0 |
| 3rd | 715 | \$0 | \$0 | \$1,309,900 | \$0 |
| 4th | 354 | \$0 | \$0 | \$855,502 | \$0 |
| 5th | 728 | \$0 | \$0 | \$1,060,379 | \$0 |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (\$) | SLP Paid (\$) | OT Paid (\$) | Other Therapy Paid (\$) |
| 1st | 813 | 0% | 0% | 100% | 0% |
| 2nd | 719 | 0% | 0% | 100% | 0% |
| 3rd | 715 | 0% | 0% | 100% | 0% |
| 4th | 354 | 0% | 0% | 100% | 0% |
| 5th | 728 | 0% | 0% | 100% | 0% |

Table 42. CY 2000 Claim Level Analysis of Most Frequently Reported Claim Diagnoses (Physician (B) Setting)

| Claim Frequency Rank | 3-Digit Principal Dx Code | Claims (N) | Total Therapy Paid (\$) | Total Claim Paid (\$) | Therapy Paid (\$) of Claim Paid (\$) |
|----------------------|---------------------------|--------------|-------------------------|-----------------------|--------------------------------------|
| 1st | 724 | 554,302 | \$31,738,481 | \$37,848,764 | 83.9% |
| 2nd | 715 | 339,380 | \$24,449,492 | \$28,657,588 | 85.3% |
| 3rd | 719 | 337,274 | \$20,405,086 | \$23,465,781 | 87.0% |
| 4th | 726 | 292,455 | \$13,380,714 | \$17,757,782 | 75.4% |
| 5th | 847 | 215,884 | \$20,349,131 | \$22,129,842 | 92.0% |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (\$) | SLP Paid (\$) | OT Paid (\$) | Other Therapy Paid (\$) |
| 1st | 724 | \$228 | \$0 | \$140 | \$31,733,276 |
| 2nd | 715 | \$252 | \$0 | \$0 | \$24,448,425 |
| 3rd | 719 | \$143 | \$0 | \$248 | \$20,401,465 |
| 4th | 726 | \$373 | \$0 | \$0 | \$13,380,321 |
| 5th | 847 | \$25 | \$0 | \$0 | \$20,346,160 |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (\$) | SLP Paid (\$) | OT Paid (\$) | Other Therapy Paid (\$) |
| 1st | 724 | 0.0% | 0.0% | 0.0% | 100.0% |
| 2nd | 715 | 0.0% | 0.0% | 0.0% | 100.0% |
| 3rd | 719 | 0.0% | 0.0% | 0.0% | 100.0% |
| 4th | 726 | 0.0% | 0.0% | 0.0% | 100.0% |
| 5th | 847 | 0.0% | 0.0% | 0.0% | 100.0% |

Table 43. CY 2000 Claim Level Analysis of Most Frequently Reported Claim Diagnoses (Nonphysician (B) Setting)

| Claim Frequency Rank | 3-Digit Principal Dx Code | Claims (N) | Total Therapy Paid (\$) | Total Claim Paid (\$) | Therapy Paid (\$) of Claim Paid (\$) |
|----------------------|---------------------------|--------------|-------------------------|-----------------------|-----------------------------------------|
| 1st | 739 | 1,334,896 | \$3,832 | \$30,870,227 | 0.0% |
| 2nd | 839 | 267,087 | \$1,208 | \$5,440,767 | 0.0% |
| 3rd | 724 | 122,578 | \$214,180 | \$2,609,025 | 8.2% |
| 4th | 722 | 98,696 | \$24,588 | \$2,093,801 | 1.2% |
| 5th | 723 | 64,913 | \$84,474 | \$1,228,624 | 6.9% |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (\$) | SLP Paid (\$) | OT Paid (\$) | Other Therapy Paid (\$) |
| 1st | 739 | \$0 | \$0 | \$0 | \$3,832 |
| 2nd | 839 | \$0 | \$0 | \$0 | \$1,208 |
| 3rd | 724 | \$68 | \$0 | \$0 | \$214,112 |
| 4th | 722 | \$271 | \$0 | \$0 | \$24,317 |
| 5th | 723 | \$0 | \$0 | \$0 | \$84,474 |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (%) | SLP Paid (%) | OT Paid (%) | Other Therapy Paid (%) |
| 1st | 739 | 0.0% | 0.0% | 0.0% | 100.0% |
| 2nd | 839 | 0.0% | 0.0% | 0.0% | 100.0% |
| 3rd | 724 | 0.0% | 0.0% | 0.0% | 100.0% |
| 4th | 722 | 1.1% | 0.0% | 0.0% | 98.9% |
| 5th | 723 | 0.0% | 0.0% | 0.0% | 100.0% |

5.8.2 Analysis of Most Frequently Reported Claim Diagnoses by Institutional Provider Claim Type

Another pattern of utilization analysis by claim diagnosis is presented in the tables in Appendix W. These tables contain comparisons of the most frequently reported claim diagnosis by type of institutional outpatient therapy claims. An important factor to consider in any utilization analysis or condition-based outpatient therapy payment policy is whether there are differences in the conditions presented by patients who only require the services of one therapy specialty versus those who may require multiple types of service.

The study analyzed all institutional provider-setting claims from CY 1999 through CY 2000. Claims that only contained the physical therapy revenue center (042x) were identified as 'PT Only.' Those with only 044x were labeled 'SLP Only.' Those with only revenue center 043x were considered "OT Only." Claims that contained any combination of the PT, SLP or OT revenue centers were analyzed as 'Combo' claims. Those claims that contained 'always therapy' HCPCS billed in any other revenue center were identified as 'Other Therapy' claims. The following Tables³⁵ (44-49) for CY 2000 highlight that there were indeed clinical differences in the conditions presented by patients who received one type of therapy versus another. There were also differences when a patient required the services of more than one therapy specialty.

³⁵ See Appendix L for diagnosis code descriptors.

Table 44. CY 2000 Claim Level Analysis of Most Frequently Reported Claim Diagnoses (All Institutional Claim Types)

| Claim Frequency Rank | 3-Digit Principal Dx Code | Claims (N) | Total Therapy Paid (\$) | Total Claim Paid (\$) | Therapy Paid (\$) of Claim Paid (\$) |
|----------------------|---------------------------|--------------|-------------------------|-----------------------|--------------------------------------|
| 1st | V57 | 766,399 | \$158,478,359 | \$172,604,909 | 91.8% |
| 2nd | 724 | 427,030 | \$86,749,371 | \$94,718,644 | 91.6% |
| 3rd | 719 | 393,592 | \$96,691,815 | \$107,243,639 | 90.2% |
| 4th | 715 | 307,213 | \$71,205,170 | \$88,036,908 | 80.9% |
| 5th | 781 | 251,245 | \$75,512,874 | \$85,270,346 | 88.6% |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (\$) | SLP Paid (\$) | OT Paid (\$) | Other Therapy Paid (\$) |
| 1st | V57 | \$60,521,418 | \$679,689 | \$9,908,785 | \$95,278 |
| 2nd | 724 | \$55,810,805 | \$2,530,682 | \$17,121,084 | \$50,304 |
| 3rd | 719 | \$36,569,403 | \$36,019 | \$4,189,805 | \$23,049 |
| 4th | 715 | \$33,292,627 | \$14,354,963 | \$22,606,530 | \$154,559 |
| 5th | 781 | \$2,504,249 | \$27,407,548 | \$2,148,253 | \$410,850 |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (%) | SLP Paid (%) | OT Paid (%) | Other Therapy Paid (%) |
| 1st | V57 | 79.2% | 5.2% | 15.1% | 0.5% |
| 2nd | 724 | 95.1% | 0.2% | 4.6% | 0.1% |
| 3rd | 719 | 85.1% | 1.6% | 13.2% | 0.1% |
| 4th | 715 | 85.0% | 1.0% | 13.9% | 0.1% |
| 5th | 781 | 73.9% | 3.4% | 22.7% | 0.1% |

Table 45. CY 2000 Claim Level Analysis of Most Frequently Reported Claim Diagnoses (PT-Only Institutional Claims)

| Claim Frequency Rank | 3-Digit Principal Dx Code | Claims (N) | Total Therapy Paid (\$) | Total Claim Paid (\$) | Therapy Paid (\$) of Claim Paid (\$) |
|----------------------|---------------------------|---------------|-------------------------|-----------------------|--------------------------------------|
| 1st | V57 | 614,637 | \$116,216,993 | \$123,942,424 | 93.8% |
| 2nd | 724 | 407,213 | \$79,260,946 | \$85,276,857 | 92.9% |
| 3rd | 719 | 335,188 | \$75,645,075 | \$81,964,577 | 92.3% |
| 4th | 715 | 253,340 | \$55,274,300 | \$68,126,966 | 81.1% |
| 5th | 726 | 203,968 | \$35,496,354 | \$46,740,369 | 75.9% |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (\$) | SLP Paid (\$) | OT Paid (\$) | Other Therapy Paid (\$) |
| 1st | V57 | \$116,027,684 | \$0 | \$0 | \$189,310 |
| 2nd | 724 | \$79,225,816 | \$0 | \$0 | \$35,130 |
| 3rd | 719 | \$75,625,175 | \$0 | \$0 | \$19,900 |
| 4th | 715 | \$55,239,208 | \$0 | \$0 | \$35,091 |
| 5th | 726 | \$35,486,480 | \$0 | \$0 | \$9,875 |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (%) | SLP Paid (%) | OT Paid (%) | Other Therapy Paid (%) |
| 1st | V57 | 99.8% | 0.0% | 0.0% | 0.2% |
| 2nd | 724 | 100.0% | 0.0% | 0.0% | 0.0% |
| 3rd | 719 | 100.0% | 0.0% | 0.0% | 0.0% |
| 4th | 715 | 99.9% | 0.0% | 0.0% | 0.1% |
| 5th | 726 | 100.0% | 0.0% | 0.0% | 0.0% |

Table 46. CY 2000 Claim Level Analysis of Most Frequently Reported Claim Diagnoses (SLP-Only Institutional Claims)

| Claim Frequency Rank | 3-Digit Principal Dx Code | Claims (N) | Total Therapy Paid (\$) | Total Claim Paid (\$) | Therapy Paid (\$) of Claim Paid (\$) |
|----------------------|---------------------------|--------------|-------------------------|-----------------------|--------------------------------------|
| 1st | 787 | 153,957 | \$25,487,111 | \$33,631,836 | 75.8% |
| 2nd | 436 | 33,564 | \$7,238,320 | \$9,114,160 | 79.4% |
| 3rd | V57 | 30,775 | \$5,020,037 | \$5,853,770 | 85.8% |
| 4th | 784 | 28,189 | \$5,450,204 | \$6,226,057 | 87.5% |
| 5th | 438 | 22,031 | \$4,575,813 | \$5,568,502 | 82.2% |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (\$) | SLP Paid (\$) | OT Paid (\$) | Other Therapy Paid (\$) |
| 1st | 787 | \$0 | \$25,460,114 | \$0 | \$26,997 |
| 2nd | 436 | \$0 | \$7,213,612 | \$0 | \$24,708 |
| 3rd | V57 | \$0 | \$4,994,524 | \$0 | \$25,513 |
| 4th | 784 | \$0 | \$5,446,800 | \$0 | \$3,405 |
| 5th | 438 | \$0 | \$4,567,459 | \$0 | \$8,353 |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (%) | SLP Paid (%) | OT Paid (%) | Other Therapy Paid (%) |
| 1st | 787 | 0.0% | 99.9% | 0.0% | 0.1% |
| 2nd | 436 | 0.0% | 99.7% | 0.0% | 0.3% |
| 3rd | V57 | 0.0% | 99.5% | 0.0% | 0.5% |
| 4th | 784 | 0.0% | 99.9% | 0.0% | 0.1% |
| 5th | 438 | 0.0% | 99.8% | 0.0% | 0.2% |

Table 47. CY 2000 Claim Level Analysis of Most Frequently Reported Claim Diagnoses (OT-Only Institutional Claims)

| Claim Frequency Rank | 3-Digit Principal Dx Code | Claims (N) | Total Therapy Paid (\$) | Total Claim Paid (\$) | Therapy Paid (\$) of Claim Paid (\$) |
|----------------------|---------------------------|--------------|-------------------------|-----------------------|--------------------------------------|
| 1st | V57 | 67,882 | \$12,164,269 | \$13,592,846 | 89.5% |
| 2nd | 436 | 35,728 | \$7,150,742 | \$9,030,300 | 79.2% |
| 3rd | 781 | 33,031 | \$5,452,005 | \$7,261,332 | 75.1% |
| 4th | 780 | 32,781 | \$6,964,891 | \$8,971,069 | 77.6% |
| 5th | 715 | 28,266 | \$4,969,927 | \$6,214,963 | 80.0% |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (\$) | SLP Paid (\$) | OT Paid (\$) | Other Therapy Paid (\$) |
| 1st | V57 | \$0 | \$0 | \$12,153,956 | \$10,313 |
| 2nd | 436 | \$0 | \$0 | \$7,146,298 | \$4,444 |
| 3rd | 781 | \$0 | \$0 | \$5,451,697 | \$309 |
| 4th | 780 | \$0 | \$0 | \$6,963,038 | \$1,853 |
| 5th | 715 | \$0 | \$0 | \$4,969,088 | \$840 |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (%) | SLP Paid (%) | OT Paid (%) | Other Therapy Paid (%) |
| 1st | V57 | 0.0% | 0.0% | 99.9% | 0.1% |
| 2nd | 436 | 0.0% | 0.0% | 99.9% | 0.1% |
| 3rd | 781 | 0.0% | 0.0% | 100.0% | 0.0% |
| 4th | 780 | 0.0% | 0.0% | 100.0% | 0.0% |
| 5th | 715 | 0.0% | 0.0% | 100.0% | 0.0% |

Table 48. CY 2000 Claim Level Analysis of Most Frequently Reported Claim Diagnoses (Combo Institutional Claims)

| Claim Frequency Rank | 3-Digit Principal Dx Code | Claims (N) | Total Therapy Paid (\$) | Total Claim Paid (\$) | Therapy Paid (\$) of Claim Paid (\$) |
|----------------------|---------------------------|--------------|-------------------------|-----------------------|--------------------------------------|
| 1st | 436 | 59,753 | \$36,921,261 | \$42,859,023 | 86.1% |
| 2nd | V57 | 50,691 | \$25,023,209 | \$28,893,263 | 86.6% |
| 3rd | 781 | 42,198 | \$24,002,870 | \$27,018,483 | 88.8% |
| 4th | 438 | 31,955 | \$20,135,069 | \$22,315,834 | 90.2% |
| 5th | 780 | 31,100 | \$16,673,719 | \$20,429,626 | 81.6% |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (\$) | SLP Paid (\$) | OT Paid (\$) | Other Therapy Paid (\$) |
| 1st | 436 | \$15,733,169 | \$6,433,947 | \$14,713,871 | \$40,276 |
| 2nd | V57 | \$11,399,069 | \$3,245,119 | \$10,273,222 | \$105,800 |
| 3rd | 781 | \$11,811,488 | \$1,939,768 | \$10,247,793 | \$3,821 |
| 4th | 438 | \$8,653,925 | \$3,368,040 | \$8,097,910 | \$15,194 |
| 5th | 780 | \$7,899,334 | \$1,467,704 | \$7,299,326 | \$7,356 |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (%) | SLP Paid (%) | OT Paid (%) | Other Therapy Paid (%) |
| 1st | 436 | 42.6% | 17.4% | 39.9% | 0.1% |
| 2nd | V57 | 45.6% | 13.0% | 41.1% | 0.4% |
| 3rd | 781 | 49.2% | 8.1% | 42.7% | 0.0% |
| 4th | 438 | 43.0% | 16.7% | 40.2% | 0.1% |
| 5th | 780 | 47.4% | 8.8% | 43.8% | 0.0% |

Table 49. CY 2000 Claim Level Analysis of Most Frequently Reported Claim Diagnoses (Other Therapy Institutional Claims)

| Claim Frequency Rank | 3-Digit Principal Dx Code | Claims (N) | Total Therapy Paid (\$) | Total Claim Paid (\$) | Therapy Paid (\$) of Claim Paid (\$) |
|----------------------|---------------------------|--------------|-------------------------|-----------------------|--------------------------------------|
| 1st | 496 | 4,732 | \$447,181 | \$601,974 | 74.3% |
| 2nd | 787 | 2,502 | \$157,209 | \$300,219 | 52.4% |
| 3rd | V57 | 2,414 | \$235,931 | \$322,607 | 73.1% |
| 4th | 389 | 1,272 | \$90,638 | \$137,111 | 66.1% |
| 5th | 250 | 1,252 | \$41,452 | \$99,559 | 41.6% |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (\$) | SLP Paid (\$) | OT Paid (\$) | Other Therapy Paid (\$) |
| 1st | 496 | \$0 | \$0 | \$0 | \$447,181 |
| 2nd | 787 | \$0 | \$0 | \$0 | \$157,209 |
| 3rd | V57 | \$0 | \$0 | \$0 | \$235,931 |
| 4th | 389 | \$0 | \$0 | \$0 | \$90,638 |
| 5th | 250 | \$0 | \$0 | \$0 | \$41,452 |
| Claim Frequency Rank | 3-Digit Principal Dx Code | PT Paid (%) | SLP Paid (%) | OT Paid (%) | Other Therapy Paid (%) |
| 1st | 496 | 0.0% | 0.0% | 0.0% | 100.0% |
| 2nd | 787 | 0.0% | 0.0% | 0.0% | 100.0% |
| 3rd | V57 | 0.0% | 0.0% | 0.0% | 100.0% |
| 4th | 389 | 0.0% | 0.0% | 0.0% | 100.0% |
| 5th | 250 | 0.0% | 0.0% | 0.0% | 100.0% |

5.8.4 Analysis of the Distribution of Beneficiaries With Frequently Reported Claim Diagnoses Among the Top 1 Percent and Top 5 Percent Most Expensive Patients

One of the most challenging barriers to analyzing utilization or to developing a condition-based outpatient therapy payment model is identifying annual expenditures attributed to individuals over a calendar year that are related to a particular condition. **In the claims analysis described in sections 5.8.2 and 5.8.3, expenditures were analyzed by diagnosis on the claim, and did not consider the individual beneficiary, who may have generated multiple claims. As a result, on the tables in appendices W and X, payments associated with the same beneficiary may have been counted as 436 (acute stroke) for one claim and 820 (hip fracture) on the next claim.**

The analysis summarized in Appendices P-1.2, P-1.3, P-2.2.1 through P-2.3.2, P-3.2.1 through P-3.3.3, P-4.2.1 through P-4.3.3, and P-5.2.1 through P-5.3.4 highlight this study's attempt to identify annual expenditures per beneficiary related to any condition for which they received outpatient therapy services during CY 1998 through CY 2000. In contrast to the previously presented claim level analysis, if a beneficiary generated claims with two different principal diagnoses during a calendar year (e.g. 436 and 820 as referenced previously), in this analysis their total annual outpatient therapy expenditures would be attributed to both ICD-9 results. This is therefore an attempt to address the utilization costs of patients presenting with multiple morbidities using existing claims data.

The impact of the most costly users of outpatient therapy services can be analyzed at a national level by considering the degree to which they impact the total expenditures. This can be reflected by the proportion of total dollars paid for certain percentages of patients related to the entire population. Appendices P.1.1 through P-1.3 summarize the findings reflected in Figures 45 and 46 below. **In CY 2000, the top 5 percent most costly patients accounted for 32.5 percent of the total Part B therapy expenditures, and the top 1 percent accounted for 12.5 percent of the total expenditures.**

This was a minimal change from CY 1999, when the top 5 percent accounted for 30.2 percent and the top 1 percent accounted for 12.5 percent of total expenditures. However, the relative costs of the most expensive patients in CY 1999 and CY 2000 were markedly lower than those in CY 1998. In that year, the top 5% most costly patients accounted for 42.9 percent of total payments (or nearly \$1.0 billion), and the top 1 percent accounted for 17.6 percent of total payments. The consistency of the percent of total payments generated by the top users in CY 1999 and CY 2000 supports the finding that a majority of the payment reductions in CY 1999 resulted from application of the fee schedule to institutional providers, rather than to the imposition of the financial caps. Otherwise, with the suspension of the caps, the payments attributed to top users would have been expected to increase at a greater rate than the general population in CY 2000. This did not occur.

Figure 45. CY 2000 Percent of Total Part B Therapy Payments Attributed to the Top 5 Percent Most Costly Patients

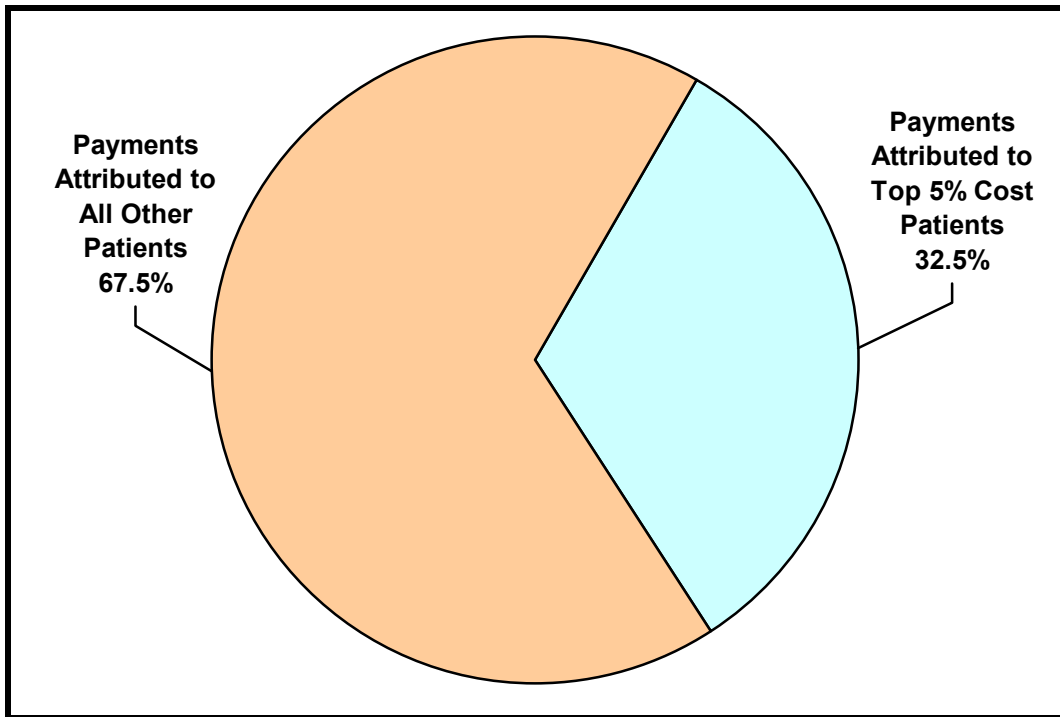
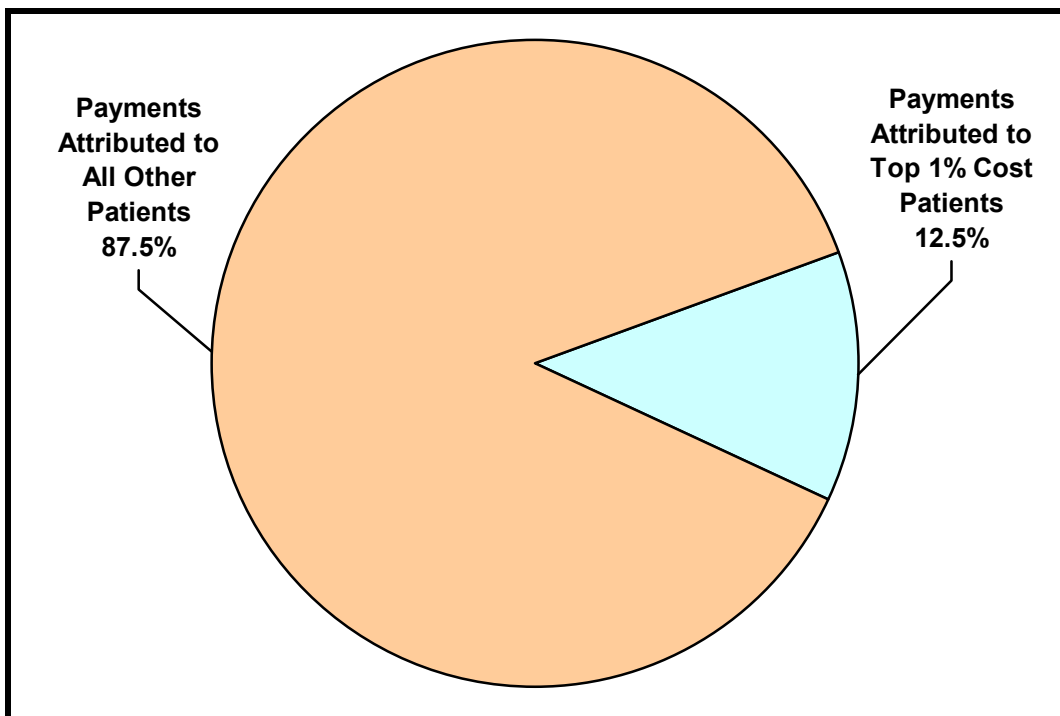
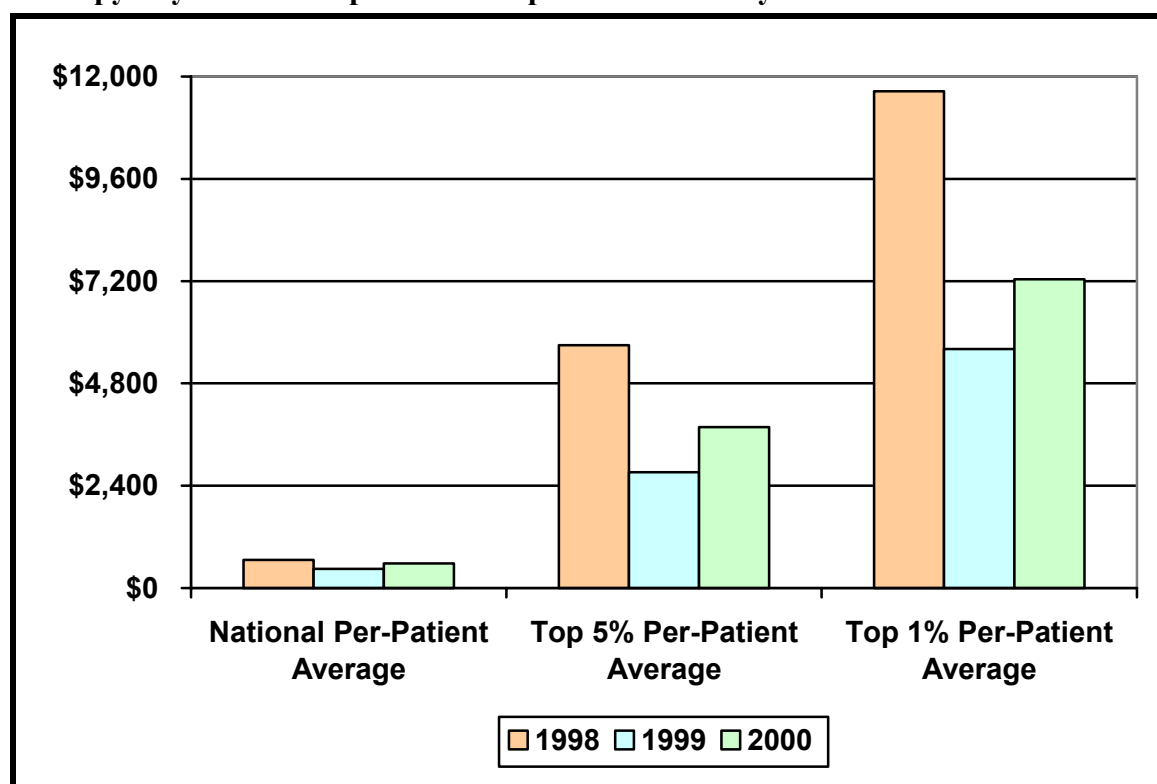


Figure 46. CY 2000 Percent of Total Part B Therapy Payments Attributed to the Top 1 Percent Most Costly Patients



When the average annual per-patient payments of the top 5 percent and top 1 percent most costly outpatient therapy users are considered across the three years under study, it becomes quite apparent that there has been a marked reduction in payments attributed to the highest cost users. As Figure 47 below highlights, while the national annual average per-patient payments declined by 12.2 percent from CY 1998 to CY 2000, the rate for the top 5 percent most costly patients declined by 33.7 percent, and the top 1 percent declined by 37.9 percent.

Figure 47. CY 1998 to CY 2000 Trends of Average Annual Per-Patient Outpatient Therapy Payments of Top 5% and Top 1% Most Costly Patients



A remarkable observation that can be drawn from this analysis of the top 5 percent and top 1 percent costliest patients is that their average annual payments were significantly above a combined \$2,400 paid cap amount in CY 1999 (equivalent to a \$3,000 combined therapy cap), and this increased in CY 2000. By implication, had the payment caps been fully implemented in CY 1999 as directed in the BBA of 1997, there would have been a substantially greater reduction in total payments than did occur.

When considering the clinical conditions presented by patients among the top users of outpatient therapy services, it becomes quite clear that patients presenting with particular conditions, especially neurological conditions, are disproportionately represented among the top users. Table 50 below is excerpted from Appendix P-2.2.1, and it provides a rank-order analysis of the percent of patients presenting with a particular diagnosis during the calendar year who were among the top 5 percent costliest patients. If diagnosis were not a factor in annual per-patient average costs, then all diagnoses would

have five percent chance of appearing within the top 5 percent most costly patients. This was not the case.

Table 50. Part B Therapy Patients Presenting With Specific 3-Digit ICD-9 CM Diagnoses Who Are Among Top 5% Users (Ranked by CY 2000 Percent of Patients With an ICD-9 Within the Top 5% Users)

| Rank By Patient Count | 3-Digit ICD-9 | Description | Percent of Patients With This ICD-9 Who Are Top 5% Users | | | % Change | | |
|-----------------------|---------------|--------------------------------------------------------------|----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|
| | | | 1998 | 1999 | 2000 | 98-99 | 99-00 | 98-00 |
| | | All Top 5% Patients | 5.0% | 5.0% | 5.0% | 0.0% | 0.0% | 0.0% |
| 1 st | 342 | Hemiplegia and hemiparesis | 23.5% | 24.3% | 24.9% | 3.3% | 2.5% | 5.8% |
| 2 nd | 436 | Acute stroke (CVA) | 20.3% | 19.7% | 18.8% | -2.8% | -4.6% | -7.2% |
| 3 rd | 438 | Late effects CVA (old) | 20.5% | 20.3% | 18.5% | -1.2% | -8.8% | -9.8% |
| 4 th | 844 | Sprains and strains of knee and leg | 7.0% | 12.3% | 15.3% | 75.7% | 24.7% | 119.1% |
| 5 th | 799 | Morbidity and mortality other ill-defined and unknown causes | 19.6% | 14.6% | 14.3% | -25.6% | -2.2% | -27.2% |
| 6 th | 781 | Symptoms involving nervous and musculoskeletal systems | 16.3% | 14.2% | 13.7% | -12.6% | -3.8% | -15.9% |
| 7 th | 332 | Parkinson's disease | 17.4% | 12.8% | 12.5% | -26.5% | -2.6% | -28.4% |
| 8 th | 820 | Fracture of neck of femur (hip) | 14.3% | 12.3% | 12.1% | -14.4% | -1.5% | -15.7% |
| 9 th | V43 | Organ or other tissue replaced | 2.3% | 5.5% | 12.0% | 142.4% | 119.8% | 432.8% |
| 10 th | 401 | Essential hypertension | 12.0% | 10.6% | | -12.3% | 9.8% | -3.7% |

In CY 2000, 24.9 percent of all patients with hemiplegia and hemiparesis (342) were among the top 5 percent most costly patients. A patient with this diagnosis is nearly 5 times more likely to be among the top 5 percent costliest patients than the average patient. In addition, according to the tables in Appendix 5.2.2, a high-cost patient with this diagnosis had an average annual cost of \$4,629, representing 67.9 percent of the total annual payments for diagnosis 342. The second and third ranked diagnoses are also neurologic conditions (436-acute stroke and 438-late effects of stroke), and are four times more likely to be among the top 5 percent cost patients.

It is remarkable that during the three years under study, neurologic diagnoses remained disproportionately represented among those conditions more likely to be found in the highest cost therapy patients. This is despite the factors mentioned in section 5.8, that these patients usually received services from institutional providers which experienced lower payments through the application of the fee schedule in CY 1999. This suggests that even with a level payment playing field, patients presenting with a neurologic condition are more likely to be among the most costly patients.

Certain orthopedic conditions also have demonstrated an increased likelihood of being over represented among the top 5 percent cost patients. For example, in CY 1998, diagnosis 844-sprains and strains of the knee and leg had only a 7 percent representation within the high cost user group. Therefore, patients presenting with this diagnosis were only minimally more likely to be among the high cost users than the average patient. By CY 2000, 15.3 percent of all patients with diagnosis 844 were among the top 5 percent cost patients. Within two years, this diagnosis climbed from an average risk, to more than triple the average risk of appearing within the top 5 percent cost patients.

Similarly, the top 1 percent most costly patients also demonstrated that certain conditions are more likely to be represented. Table 51 below is excerpted from Appendix P-2.2.2 and provides a rank-order analysis of the percent of patients with a particular diagnosis who were among the top 1 percent cost patients in each calendar year. Again, diagnosis 342-hemiplegia and hemiparesis is the most over represented among the top 1 percent cost patients. Patients in the top percent with this diagnosis averaged \$7,785 in payments in CY 2000. In addition, while they represented only 8.3 percent of the patients with this diagnosis, they accounted for 38.0 percent of the total payments.

Table 51. Part B Therapy Patients Presenting With Specific 3-Digit ICD-9 CM Diagnoses Who Are Among the Top 1% Users (Ranked by CY 2000 Percent of Patients With an ICD-9 Within the Top 1% Users)

| Rank By Patient Count | 3-Digit ICD-9 | Description | Percent of Patients With This ICD-9 That are Top 1% Users | | | % Change | | |
|-----------------------|---------------|--------------------------------------------------------------|-----------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|
| | | | 1998 | 1999 | 2000 | 98-99 | 99-00 | 98-00 |
| | | All Top 1% Patients | 1.0% | 1.0% | 1.0% | 0.0% | 0.0% | 0.0% |
| 1 st | 342 | Hemiplegia and hemiparesis | 7.1% | 7.5% | 8.3% | 5.1% | 10.6% | 16.2% |
| 2 nd | 844 | Sprains and strains of knee and leg | 2.5% | 7.0% | 7.5% | 181.9% | 8.2% | 205.1% |
| 3 rd | 843 | Sprains and strains of hip and thigh | 2.7% | 6.9% | 5.3% | 156.7% | -22.5% | 98.8% |
| 4 th | 436 | Acute stroke (CVA) | 5.9% | 5.5% | 5.3% | -6.7% | -3.9% | -10.3% |
| 5 th | 438 | Late effects CVA (old) | 5.9% | 5.8% | 5.2% | -1.6% | -10.2% | -11.6% |
| 6 th | 781 | Symptoms involving nervous and musculoskeletal systems | 3.8% | 3.8% | 3.7% | 1.1% | -3.6% | -2.6% |
| 7 th | 401 | Essential hypertension | 3.0% | 2.6% | 3.3% | -12.4% | 25.4% | 9.8% |
| 8 th | 847 | Sprains and strains of other and unspecified parts of back | 0.7% | 2.7% | 3.3% | 284.7% | 20.9% | 365.2% |
| 9 th | 840 | Sprains and strains of shoulder and upper arm | 1.0% | 3.0% | 3.1% | 215.6% | 3.3% | 226.1% |
| 10 th | 799 | Morbidity and mortality other ill-defined and unknown causes | 4.7% | 2.1% | 3.0% | -54.9% | 43.9% | -35.0% |

In summary, any outpatient therapy payment policy that seeks to include beneficiary clinical characteristics such as claim diagnosis must consider multiple interrelated variables. **The tables in Appendices P, W, and X clearly demonstrate that there are significant differences in: 1) the types of conditions treated in the various Part B therapy settings; 2) the types of therapy services furnished within these various settings for similar conditions; 3) the per-patient costs associated with similar conditions across the different settings; and 4) claims processing procedures between provider settings, particularly between institutional and noninstitutional settings.**

It must be noted that this study examined diagnoses only to 3-digit specificity to permit management of the volume. Within many of these more generic 3-digit diagnoses are 4 and 5-digit codes that describe specific conditions related to specific body parts. These 3-digit diagnoses reported are not reflective of providers failing to code diagnoses to the highest specificity.

However, there are a number of important observations that appear to be consistent regarding the diagnoses presented by outpatient therapy patients. First, most outpatient therapy patients present with orthopedic conditions. Second, orthopedic conditions account for a majority of the total part B therapy expenditures. Third, individual patients presenting with neurologic conditions are more costly on average per calendar year. Fourth, patients with neurologic conditions are disproportionately represented among the highest cost patients. And fifth, year-to-year changes in patient volume and payments across the three years under study are consistent with payment policy changes during this period. Namely, patients with diagnoses that demonstrated marked payment reductions in CY 1999 were more frequently treated in institutional provider settings, which also demonstrated significant payment reductions. Patients with diagnoses that demonstrated increased payments represented conditions more likely to be treated in noninstitutional settings, which also realized increased payments.

5.9 Benchmarking Analysis

This study used various methodologies to identify norms and distributions (e.g., mean, median, inter-range quartile) for each dependent variable (e.g., payment amount, number of claims, number of beneficiaries treated). This data universe was then divided into various subsets consistent with the research design (e.g., by region, provider setting). This process is described here as benchmarking analysis.

Results of benchmarking can provide guidance for the development of appropriate medical review edits by CMS and Medicare contractors. Benchmarking results can also provide a foundation for policy-making decisions including new payment policies. Benchmarking analysis is particularly useful given that the resumption of per-beneficiary annual caps is under consideration for the outpatient therapy benefits, which are currently limited only by medical necessity considerations. Benchmarking analysis could assist policymakers in identifying those individuals who are likely to be most affected by any proposed policy changes, including alternative payment options.

Findings from several analyses were presented in Appendices M, P, V, Y and Z. **They highlight the relationship between individuals' characteristics (such as age, gender, race, geographic location, and diagnosis) and the level of therapy service utilization. Multivariate analysis discloses the level of influence that these beneficiaries' characteristics have on Medicare outpatient therapy payments. Age, diagnosis and geographic location appeared to be the strongest factors determining the payment amount.**

Of interest to many is the number of individuals whose therapy payments exceeded the \$1,500 annual outpatient therapy caps in CY 1999 (PT/SLP \$1,500 and OT \$1,500). **Because of current data limitations in the NCH claims files (and in the 5% SAF) described in Sections 5.2 and 4.3.2 of this report, there is no way to accurately identify the outpatient therapy plan of care in nearly 25 percent of the claims submitted when using the proscribed methodology of tracking by the GN, GP, and GO modifiers (over \$323 million in CY 1999 payments).** Had the same caps and tracking methodology applied in CY 2000, over \$477 million in outpatient therapy

payments would not have been traceable to a particular cap. Also, as discussed in Section 4.3.2, NCH claims data would not include information on patients whose providers stopped billing Medicare when the cap was reached, and who may have subsequently billed a secondary insurance or the beneficiary directly. **Therefore, neither this study nor any other study can accurately state the total number of beneficiaries whose therapy expenditures would have exceeded one or both of the caps. Studies using claims data can only indicate the minimum number of patients known to have exceeded at least one cap.**

It is particularly challenging to identify how many individuals may have surpassed the caps in CY 1999 because the caps were applied per-patient-per-provider, and not per-patient across all providers (except hospital outpatient departments) as Congress intended initially. **When beneficiaries received services beyond the \$1,500 caps in CY 1999, it may not reflect improper behavior by the providers. Rather, it may merely reflect that these beneficiaries received additional services from another provider. There can be no accurate determination of how many patients may be affected by caps in subsequent years until this gap in reporting payments across providers is resolved.**

This study approached this benchmarking challenge by aggregating all outpatient therapy payments into one combined amount. Therefore, in the benchmarking analysis, institutional provider payments include any payments to the physical therapy, speech-language pathology, and occupational therapy revenue centers (042x, 044x, and 043x), and any payments made for ‘always therapy’ HCPCS codes billed by institutions in non-therapy revenue centers. Noninstitutional payments included any payments to physical or occupational therapists in private practice (specialties 65 and 67), and payments made for any ‘always therapy’ HCPCS codes to physician and other nonphysician specialties.

As discussed several times in this report, inclusion of the ‘other’ undefined therapy services (those not identified as PT, OT, or SLP) is consistent with CMS’ directives regarding which services were subjected to the annual financial caps. In addition, current payment policy does not justify any presumption that the payments for these ‘other’ undefined therapy services should be assigned arbitrarily to a PT/SLP or OT financial cap. Since it was not defensible either to omit these other therapy services from consideration, or to arbitrarily assign them to one of the existing caps, this study included all outpatient therapy payments into one aggregate annual payment per patient, instead of three payments by therapy type.

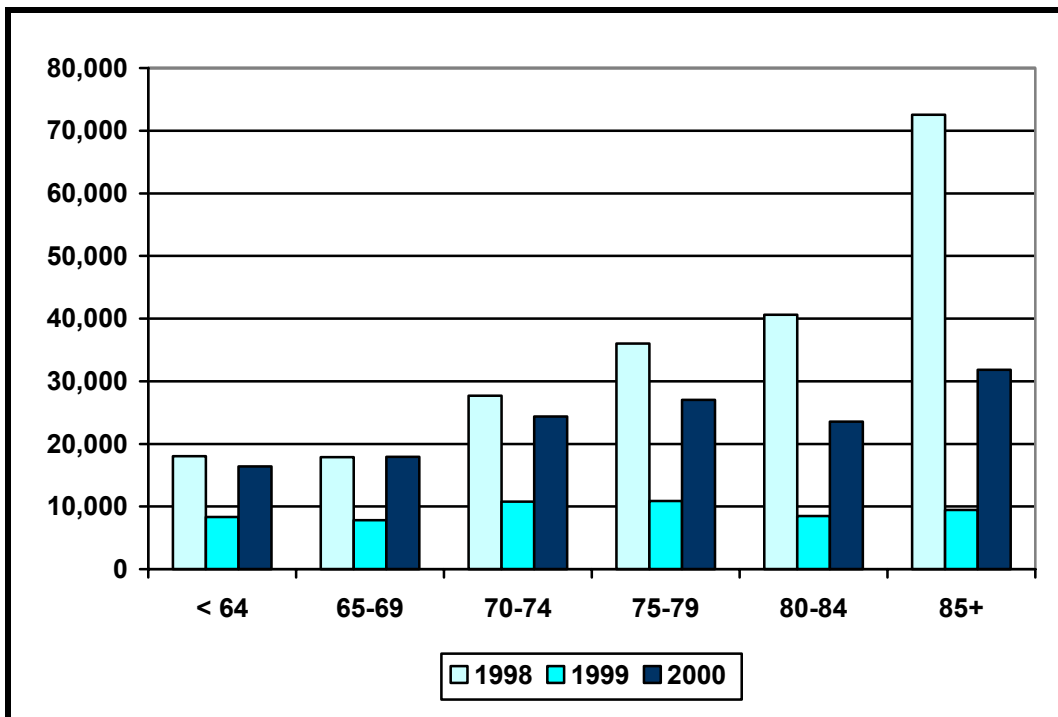
5.9.1 Estimates of Patients Exceeding Outpatient Therapy Caps

Because there were two \$1,500 outpatient therapy caps in CY 1999, the tables in Appendix V were created to provide a snapshot estimate of the number of patients that received services above certain payment thresholds (caps). The same method was applied consistently to the three years under study (CY 1998 through CY 2000). **It is important to note that the \$1,500 caps were not payment caps, per-se, but were caps based on the Medicare allowed amounts. Because outpatient therapy services are a Part B benefit, a 20 percent deductible applies to all allowed charges. Therefore, when the allowed amount is \$1,500, the maximum Medicare payment would be \$1,200. The**

benchmarking tables therefore reflect the lower Medicare payment amount number, rather than the Medicare allowed amount.

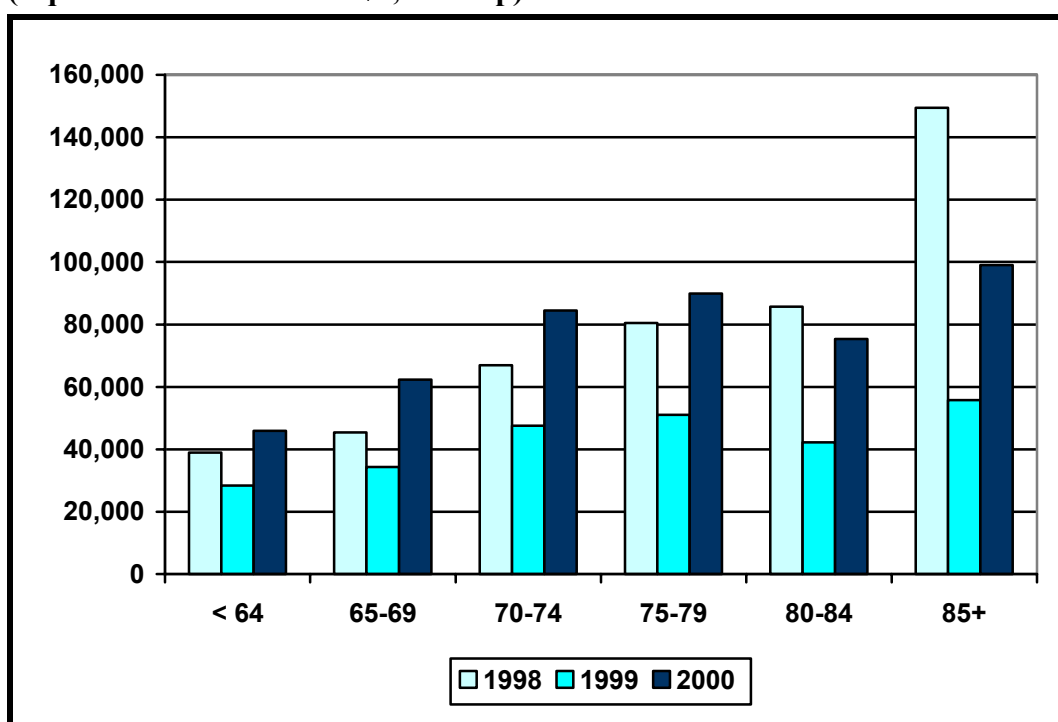
Figure 48 below highlights the number of patients who exceeded \$2,400 in Medicare payments (equivalent to a \$3,000 combined annual cap) from CY 1998 through CY 2000. It is notable that from CY 1998 to CY 1999, the total number of patients generating annual payments over \$2,400 declined from more than 213,000 to approximately 56,000, and then increased to about 141,000 in CY 2000. **Although a portion of the drop in CY 1999 could be attributed to the payment caps, the 34 percent reduction in the total number of patients surpassing \$2,400 in annual payments from CY 1998 to CY 2000 (see Appendix V-1.1) indicates the residual influence of the imposition of the physician fee schedule on institutional providers.** It is also notable that the greatest declines in numbers of higher cost patients were in the older age groups. Again, since older beneficiaries are more likely to receive services from institutional providers that began the fee schedule in CY 1999, most of this change could be expected. However, it is also notable that, although all providers are now under the same fee schedule, there remain a larger number of older patients that required over \$2,400 in combined outpatient therapy in CY 2000. For example, Appendix V-2.2 indicates that in CY 2000, 21.7 percent of the patients receiving over \$2,400 in combined therapies were aged 85 and above. However, this age group represents only 16.7 percent of all outpatient therapy patients, indicating that this age group is over-represented.

Figure 48. Number of Outpatient Therapy Patients with Over \$2,400 in Medicare Payments (Equivalent to Combined \$3,000 Cap)



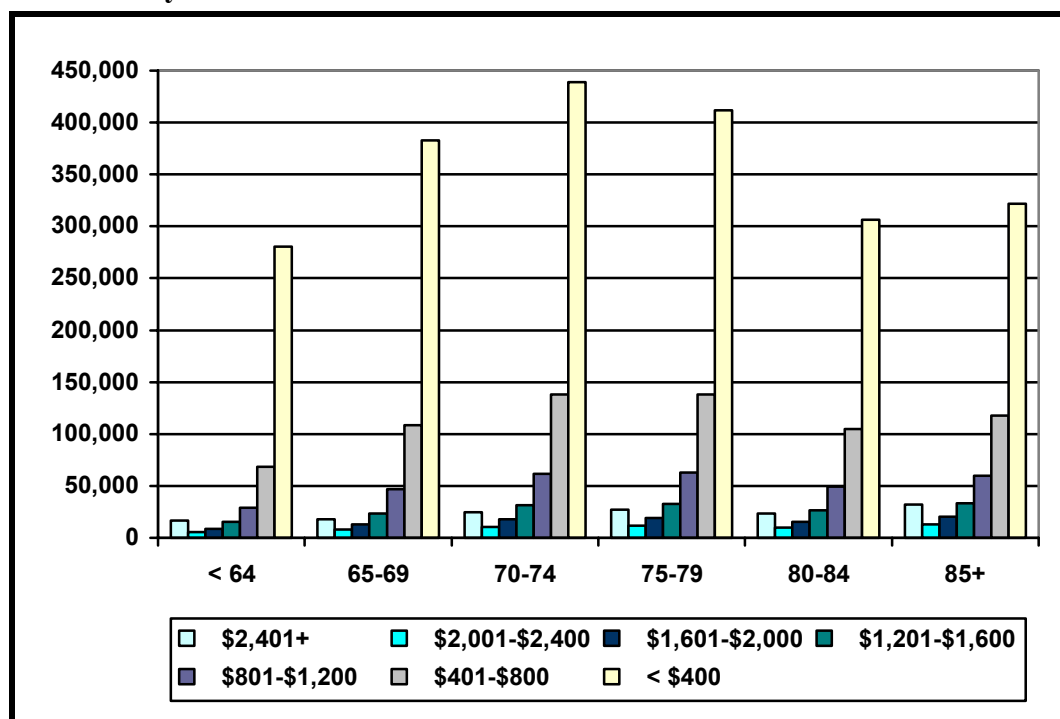
As a sensitivity analysis, the study also identified the number of outpatient therapy patients who surpassed \$1,200 in annual combined payments (equivalent to a \$1,500 cap). This result presented in Figure 49 includes all therapy services furnished. Because of the limitations in assigning the “other” therapy services to one of the two caps, Figure 49 is not as representative of the impact of the separate caps as Figure 48 above is representative of the \$2,400 combined caps. Patients exceeding the \$2,400 level definitely exceeded at least one of the two financial caps. Even with the decreased sensitivity of the second figure, the trends in this figure are consistent with the previous one. That is, the number of patients exceeding the \$1,500 payment threshold dramatically reduced in CY 1999 and recovered some in CY 2000. However, there remained a disproportionate number of older beneficiaries receiving greater than \$1,200 in outpatient therapy services in CY 2000, indicating age differences in the need for outpatient therapy services.

Figure 49. Number of Outpatient Therapy Patients with Over \$1,200 in Payments (Equivalent to Combined \$1,500 Cap)



Additional tables in Appendix V-3 also highlight the benchmark variations in patterns of utilization by the number of patients by age groups that surpassed particular payment thresholds. Figure 50 below highlights such variations at \$400 payment increments (equivalent to \$500 allowed amounts).

Figure 50. CY 2000 Number of Outpatient Therapy Patients That Surpassed Selected Payment Thresholds



5.9.2 Per-Patient Cost Benchmarks by Age-Gender Variables Combined

Multivariate analysis indicated that the combined effect of age and gender was a strongest determinant of the increased use of outpatient therapy services. Controlling for age and gender factors, the tables in Appendix M provide summaries of this analysis for CY 1998 through CY 2000. Included in these tables are descriptive statistics, payment thresholds by quartile and percentile, and examples of extreme patient observations (the 5 most expensive outpatient therapy patients in each group).

Figures 51-53 demonstrate the year-to-year changes in the number of patients, average annual payments, and median payments for patients representing these demographics. They highlight that more females receive outpatient therapy services. However, while males represent a bell curve similar to the enrollment patterns of the Medicare population, females demonstrate a spike among users 85 years and above that may indicate unique needs of this population. The average payments for these age-gender groups are similar and both indicate increases in cost with age. **This indicates that even though there are more females in each age group receiving outpatient therapy, the average costs are similar between each gender in each age stratum.**

The total number of patients receiving therapy and the average payment per-patient can serve as important benchmark indicators. However, due to the skewed nature of health expenditures, the median payments were also provided. The median payment represents the costs for the middle patient in any group (e.g. the cost of the 50th of 100 people).

The year-to-year median payment changes (*see Figure 46*) may best represent the counter forces of the imposition of the fee schedule on institutional providers, and the inflationary increases to the fee schedule in CY 1999 and CY 2000 on payments for the average patient. The results indicate that the average therapy outpatient, represented by the median payment, was unaffected by the payment policy changes. With the exception of males and females aged 85 and above, the median payment increased across the three years under study.

The greatest increases were observed in younger patients who were more likely to see noninstitutional providers that benefited from fee schedule increases. The smaller increases and losses were for older patients who usually receive institutional provider services. All groups saw increases in the median payment in CY 2000 as all benefited from fee schedule increases. Again, since the median patient was unlikely to require an intensity of services approaching the caps in CY 1999, it was unlikely that the presence of caps affected the median payment. **A potential policy implication of this increasing cost for the median patient in a capped environment is that if the caps do not account for inflationary increases in the fee schedule, the median will continue to approach the cap amount, thereby increasing the number of patients affected by the caps.** (*See Section 3.1 and Appendix N for discussion and examples of the changes in the fee schedule for ‘always therapy’ procedures from CY 1998 through CY 2001.*)

Figure 51. Number of Outpatient Therapy Patients by Age-Gender Demographics

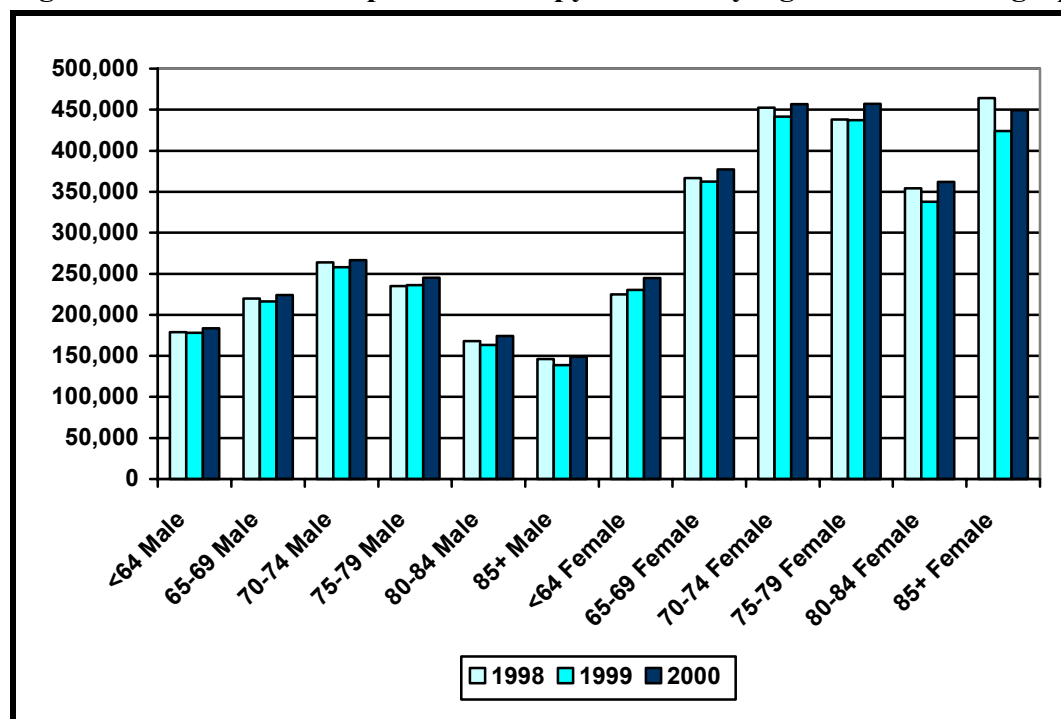


Figure 52. Average Outpatient Therapy Payments by Age-Gender Demographics

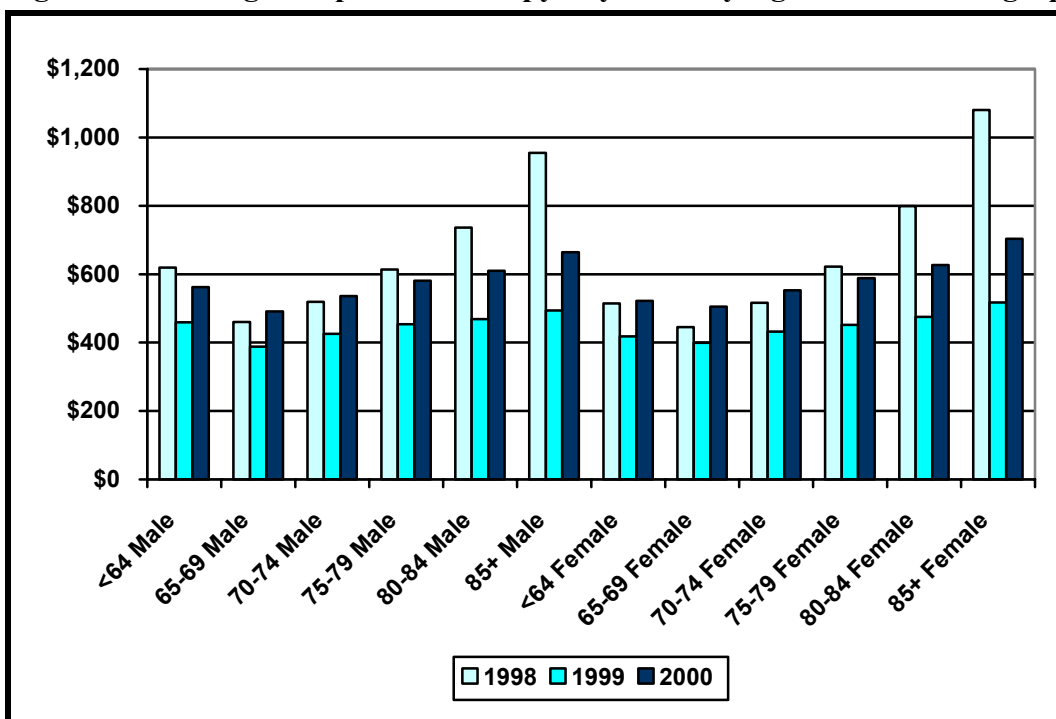
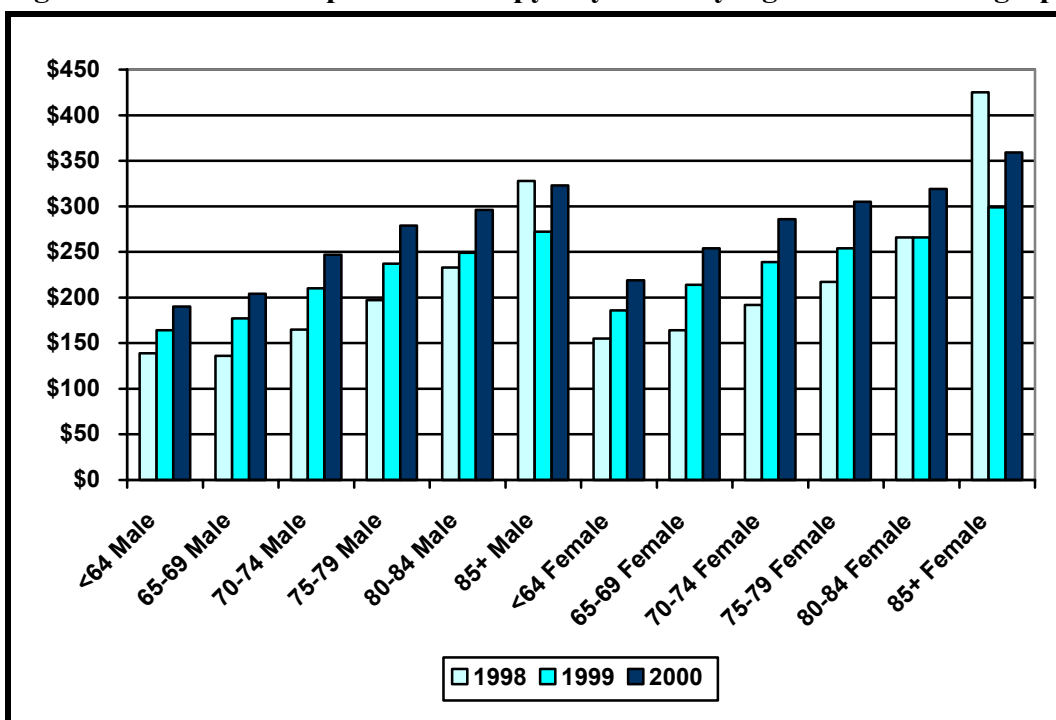


Figure 53. Median Outpatient Therapy Payments by Age-Gender Demographics



In addition to shifts in the median payment over time, another important consideration in benchmarking is describing the characteristics of beneficiaries at particular quartiles or percentiles in the utilization curves, particularly at the extremes. For high cost patients,

this type of analysis could identify improper billing behavior. It also could indicate particular patient demographic and condition characteristics that associate with a higher potential for the need for extensive outpatient therapy services. **Tables in Appendix M show that the great majority of outpatient therapy patients utilize only a small amount of outpatient therapy services. Approximately 67 percent use less than \$500 of services. However, a small minority was associated with significantly higher costs, which markedly escalate per-patient after the 90th percentile. As described in Section 5.8.4, the top 5 percent most expensive patients in CY 2000 accounted for nearly one-third of all outpatient therapy expenditures.**

Figure 54 below demonstrates that there are also remarkable differences in these utilization patterns when the age-gender variables are compared. This pattern was consistent over the three years under study. Table 52 also identifies that some individual patients received extreme amounts of outpatient therapy services in the tens of thousands of dollars and above, even in CY 1999 indicating potential program safeguard issues. Tables M-1-3, M-2.3, and M-3.3 identify these extremes from CY 1998 through CY 2000.

Figure 54. CY 2000 Distribution of Outpatient Therapy Per-Patient Payments Thresholds by Quantile

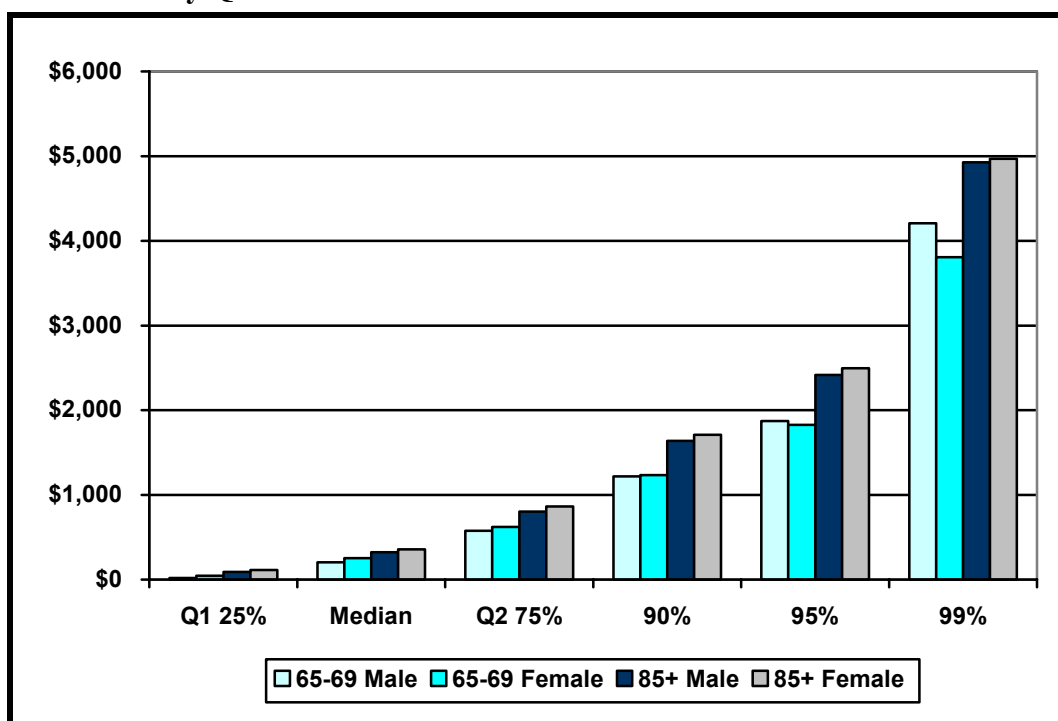


Table 52. CY 1999 Extreme Observations of High Cost Annual Per-Patient Payments

| 1999 | Male | | | | | | Female | | | | | |
|------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | <64 | 65-69 | 70-74 | 75-79 | 80-84 | 85+ | <64 | 65-69 | 70-74 | 75-79 | 80-84 | 85+ |
| 1st | \$108,152 | \$56,031 | \$65,154 | \$55,181 | \$51,212 | \$47,933 | \$67,992 | \$83,135 | \$76,519 | \$69,286 | \$72,723 | \$69,956 |
| 2nd | \$76,323 | \$49,017 | \$58,047 | \$54,318 | \$51,006 | \$42,883 | \$67,348 | \$72,343 | \$72,197 | \$52,024 | \$69,745 | \$66,206 |
| 3rd | \$74,646 | \$48,798 | \$57,105 | \$44,607 | \$50,296 | \$41,332 | \$66,927 | \$67,362 | \$67,749 | \$51,826 | \$66,683 | \$60,576 |
| 4th | \$71,677 | \$44,492 | \$52,297 | \$42,500 | \$46,509 | \$41,037 | \$56,151 | \$66,177 | \$54,300 | \$47,454 | \$61,326 | \$53,769 |
| 5th | \$69,440 | \$41,501 | \$51,571 | \$38,639 | \$44,878 | \$37,906 | \$55,579 | \$54,615 | \$54,250 | \$46,990 | \$53,151 | \$52,862 |

5.9.3 Analysis of the Top 5 Percent and Top 1 Percent Most Costly Outpatient Therapy Patients

Following the analysis presented in the previous section (5.9.2), this study conducted further analysis of those outpatient therapy patients who were among the top 5 percent and top 1 percent most costly patients. The purpose was to identify any demographic characteristics that could indicate populations of enrollees more likely to utilize extensive outpatient therapy services, and who therefore would be more likely to be impacted by outpatient therapy caps. Appendix Y contains tables summarizing the top 5 percent and Appendix Z summarizes the top 1 percent. The characteristics measured in these Appendices were patient age, gender, race, and CMS region of residence. The results span CY 1998 through CY 2000. Discussion of the diagnosis characteristics of the top 5 percent and top 1 percent most costly patients is located in Section 5.8.4.

In section 5.9.1, this report identified that **there was a disproportionate number of older beneficiaries among the most expensive patients**. That section also indicated that the female aged 85 and above group had the highest rate of occurrence among the most expensive patients.

When patient race was considered, it appears that all minority groups have a higher predisposition to needing the most costly outpatient therapy. In Appendix Z-3.3, the CY 2000 rate of Hispanics among the top 1 percent cost patients is 3.3 times the rate of the average user. African-Americans (3.0 times), Asian (2.6 times), and patients identified as ‘Other’ race (1.8 times) are also more likely to be among the top 1 percent of therapy cost patients. This pattern persisted among the CY 2000 top 5 percent costliest patients as demonstrated in Appendix Y-3.3. **Racial minorities were nearly twice as likely to be among the top 5 percent users compared to the overall Medicare population.**

The policy implications of this finding are compelling. If one were to rule out any program integrity issues, then consideration must be given as to the underlying reasons for these differences. One possibility is that there may be actual differences in the need for outpatient therapy services by these groups. If so, then any limitations on annual payments could disproportionately impact them. Another possibility is that there may be access to care issues that prevent these groups from receiving necessary preventive or early intervention services, and that could lead to the need for costlier care later. Finally, the differences may be related to the patterns of utilization, i.e., racial minorities use more

institutional care. **Unless these issues are addressed, racial minorities would be disproportionately impacted by payment limitations.**

When region of residence of is considered, there are notable differences in the likelihood of patient being among the highest cost users of outpatient therapy services. In CY 2000, as demonstrated in Appendix Z-4.3, there was a notable disparity between Region VI-Dallas and the remaining nine regions in the likelihood of a patient being among the top 1 percent most expensive patients. If a patient lived in Region VI during CY 2000, they were 2.8 times more likely to be among the top 1 percent therapy users than any patient if region were not considered. The next closest region was Region IV-Atlanta, where a beneficiary was only slightly more likely to be a top 1 percent cost user than the average. This pattern was also present among the top 5 percent cost users in CY 2000 (*see Appendix Y-4.3*) as patients in Region VI-Dallas were nearly twice as likely as the average patient to be among the top 5 percent cost users.

A preliminary analysis was also conducted during this study to observe state-by-state variations of the top 1 and top 5 percent users that was consistent with the regional variations just described. **There is a strong correlation between where patients live and the probability of them being among the highest cost users of outpatient therapy services.** Similar to the discussion above regarding racial differences, unless there are program integrity issues to explain these regional aberrations, considerations of a patient's geographic residence may be necessary in a national payment policy.

In addition to the potential geographic differences in patient populations and practice patterns, the fee schedule pricing policy itself may have influenced the likelihood of a patient being among the top cost users of outpatient therapy services. In CY 1999 the caps did not address geographic variations in the fee schedule. Currently there are 89 different fee schedules that adjust the national rate based upon regional costs of business expenses, including professional salaries, office expenses, and malpractice. In a capped environment that does not address such regional differences in the price Medicare pays for individual procedures, beneficiaries who live in higher priced regions, and who require extensive outpatient therapy services will receive payment for fewer services than patients in lower cost regions.

In summary, examination of the most costly therapy outpatients suggested that payment policy should consider patient demographic information such as age, gender, race, geographic location, and medical condition, as well as the interaction between these variables. Policy decisions that do not address such variables may have unintended consequences.

6.0 SUMMARY AND CONCLUSIONS

6.1 Overview of the Study

As part of the Balanced Budget Reconciliation Act of 1999 (BBRA), Congress requested that the Centers for Medicare and Medicaid Services (CMS) deliver a study of utilization patterns (including nationwide patterns, and patterns by region, types of settings, and diagnosis or condition) of outpatient therapy services covered under Medicare. The report was to compare therapy services provided on or after January 1, 2000 with utilization patterns for services provided in 1998 and 1999. The primary purpose of this current study was to meet the requirements of the BBRA Study and Report on Utilization.

Over the past decade, CMS had been expending increased resources to pay for Part B therapy services under Medicare. As a result, in the Balanced Budget Act (BBA) of 1997, Congress instituted annual per beneficiary financial caps on outpatient therapy services that were effective on 1 January 1999. Simultaneously, the Medicare Physician Fee Schedule (MPFS) was applied to institutional providers of these outpatient services. Subsequently, Congress instituted a moratorium on the enforcement of the financial caps, beginning 1 January 2000. The moratorium is currently slated to expire on 31 December 2002. Barring additional legislative action, the application of the financial caps would again become effective beginning 1 January 2003.

This study analyzed claims data from the entire universe of more than 15 million outpatient therapy claims per calendar year. Its methodology was consistent with published CMS requirements for the reporting of outpatient therapy services for the purposes of tracking the 1999 financial caps. The study reports on outpatient therapy services furnished by physical therapists (PT), occupational therapists (OT), and speech-language pathologists (SLP). In addition, Part B therapy services billed by all other practitioners, such as physicians and nurse practitioners were reported as “Other” therapy.

The study results include descriptive analysis of utilization from 1998 to 2000 by the following: beneficiary demographic characteristics - including age, race, gender, state and region of residence; the setting where services were furnished; and by the patient’s primary claim diagnosis. Measurements of utilization included: the number of unique beneficiaries receiving outpatient therapy; the volume of claims; the volume of billed procedure units; utilization by month of service delivery; and Medicare payments for outpatient therapy. In addition, comparisons of the universe of therapy users to the entire Medicare enrollment database indicated trends in Medicare payments per enrollee. Medicare payment benchmark tables are presented to indicate the independent influence of beneficiary demographic variables on outpatient therapy utilization. Other variables were analyzed to provide additional detail.

6.2 Findings

6.2.1 Analysis of Utilization by Beneficiary Characteristics

This study found that a modest percentage of Medicare enrollees received outpatient therapy services in any given year. Of the 41.6 million enrollees in CY 2000, only 8.6 percent, (nearly 3.6 million) received any outpatient therapy services.

An important finding was that the actual outpatient therapy population does not resemble the Medicare population at large. The number of actual Part B therapy patients by age demographic differs from the distribution of a random sample of Medicare enrollees. Enrollees aged 80 and above are significantly more likely to receive Part B therapy services, while those aged 65-69 are less likely to receive outpatient therapy services than the average enrollee.

Outpatient therapy patients are more likely to be female, older, and live in particular geographic regions. A majority of Part B therapy patients receive services for orthopedic conditions, particularly sprains and strains of the back, knees, hips, and shoulders. Stroke is the most common among neurologic conditions. While approximately 10.1 percent of enrollees receive outpatient therapy services from more than one setting, the vast majority received services from a single provider. Most outpatient therapy patients (33%) are treated in hospital settings. Skilled Nursing Facilities (SNFs) and physician offices each see 15 percent, followed by physical therapists in private practice at 12 percent, Outpatient Rehabilitation Facilities (ORFs), commonly known as Rehabilitation Agencies, at 11 percent, and other nonphysician practitioners at 10 percent. Comprehensive Outpatient Rehabilitation Facilities (CORFs), occupational therapists in private practice, and other institutions each see fewer than 2 percent of outpatient therapy patients.

In CY 1999, when the therapy caps were imposed and institutional providers simultaneously became subject to the fee schedule, the number of outpatient therapy patients dropped nationally by over 87,000, or 2.5 percent. This was in spite of growth in the population of eligible Medicare beneficiaries. The beneficiary groups that demonstrated the most significant declines were individuals aged 80 and above, females, and individuals living in particular geographic locations. Settings that saw fewer patients included SNFs, CORFs, ORFs, and physician practice settings.

In CY 2000, when the caps were suspended, the number of patients increased nationally by 3.6 percent, to mirror national increases in enrollment. In the two uncapped years, 8.6 percent of enrollees received outpatient therapy services. In CY 1999, the rate was 8.3 percent. Most demographic variables demonstrated increases in patient numbers in CY 2000 consistent with national trends. The exceptions were individuals 85 and above, and those living in certain locations. Settings that saw increases in patient volume were occupational and physical therapists in private practice (+42 and +26 percent respectively), other nonphysician practices, and SNFs. CORFs, ORFs, and Other Institutions continued to treat fewer patients in CY 2000, suggesting a longer lasting shift in the pattern of outpatient therapy services away from institutional provider settings.

Older enrollees were more likely to receive outpatient therapy services; nearly all age groups had reduced services in CY 1999; and enrollees aged 80-84 and 85 and over were the only age groups less likely to receive Part B therapy in CY 2000 as compared to CY 1998.

6.2.2 Analysis of Utilization by Payment

This study identified that a modest percentage of overall Medicare Part B expenditures are attributed to outpatient therapy services in a given year. Of the \$87 billion paid to providers from the Part B Trust Fund in CY 2000, \$2.1 billion (2.4%) was paid for outpatient therapy services. From CY 1998 through CY 2000, expenditures for Part B therapy services dropped by 10.3 percent, in contrast with all other non-therapy Part B expenditures, which increased by 17.4 percent.

Total Part B therapy expenditures were greatest for patients presenting with orthopedic conditions. However, patients presenting with neurological conditions such as hemiplegia, stroke, and Parkinson's disease are more likely to be among the highest cost users of outpatient therapy services. Among orthopedic conditions, sprains and strains of the knees and hips and hip fractures consistently generated higher per-patient expenditures.

The combined influences of the application of fee schedule payments to institutional providers and the outpatient therapy caps in CY 1999 created an instantaneous and significant reduction in total Medicare payments. From CY 1998 to CY 1999, there was a net reduction in total payments of 33.9 percent, or \$780 million. Per-patient payments declined from \$662 in CY 1998 to \$449 in CY 1999.

Payment reductions in CY 1999 were realized solely from reduced payments to institutional providers, which saw payments decline by 43.4 percent, or \$890 million. Within institutions, payment reductions for SNFs, CORFs, and ORFs ranged from 53 to 65 percent (Table 14). Noninstitutional providers (therapists in private practice, physicians, and nonphysicians) actually saw increased payments of \$101 million (+36.4%) in CY 1999. Analysis of payments by month indicated that the institutional provider payment reductions were principally driven by the new fee schedule payment methodology and secondarily by decreased patient volume. The increases in noninstitutional payments were related to increased fee schedule prices and increased patient volume.

There did not appear to be a systematic bias in the reductions in patient volume by beneficiary demographics. Payments patterns across demographic groups correlated with the type of provider setting of the patient. Those patients who were more likely to be treated by institutional providers (such as women, older patients, and minorities), or who lived in states that had high numbers of institutional providers compared to noninstitutional providers, demonstrated more significant payment reductions, consistent with reductions in institutional provider payments.

In CY 2000, with the suspension of the caps and significant increases in the Medicare Physician Fee Schedule (MPFS) for therapy procedures, outpatient therapy payments

increased by \$549 million. Of this amount, \$351 million went to institutions and \$198 million went to noninstitutions. Overall payments of \$2.09 billion in CY 2000 remained 10.3 percent lower than CY 1998 (\$2.33 billion). Despite the suspension of the caps, institutional payments remained 43.4 percent lower in CY 2000 than CY 1998. This residual reduction in payments in an uncapped environment clearly indicated that it was the application of the fee schedule to institutions in CY 1999, and not the therapy caps that principally drove payment reductions. Noninstitutional providers, who were subject to the caps in CY 1999, but who benefited from increases to the fee schedule, realized increased payments of 36.4 percent in CY 1999 and an additional 52 percent in CY 2000. Payments by demographic variables reflected the changes in payments particular to the setting.

Noted aberrancies in the volume of claim lines and claim HCPCS reported across the three years were consistent with the transition of institutional providers to a new payment system. These providers transitioned from cost-based payment in CY 1998, which required minimal description of services furnished, to the line-item by date-of-service by HCPCS billing for the MPFS, which had been used by noninstitutional providers since CY 1992. These aberrancies prevent any accurate year-to-year comparison of utilization by volume or cost of individual procedures or claim lines. This study concluded that the total therapy payments, rather than procedure code or line count was the most accurate and consistent measure of utilization across the three years and across provider types.

An important consideration when measuring utilization by total expenditures is that the federal price of the procedures used most commonly for Part B therapy increased in CY 1999, and by more than ten percent in CY 2000. For example, the allowed amount for gait training (97116) increased 4.3 percent in CY 1999 and another 17.1 percent in CY 2000.

These changes in procedure pricing were related to overall corrections to the entire MPFS regarding the work, practice, and malpractice expenses attributed the performance of each individual procedure, not specifically to therapy services. Were it not for the increase in procedure pricing in CY 1999, the total Part B therapy payment reduction of 34 percent (\$780 million) would have been even greater. In addition, it is clear that the marked increase in procedure prices in CY 2000, combined with the increase in patient volume, contributed substantially to the \$550 million increase in payments in CY 2000.

6.2.3 Other Utilization Findings

This study identified that Medicare claims history data prevents an accurate identification of the number of beneficiaries who surpassed the outpatient therapy caps as applied in CY 1999. This is because of a lack of compliance with the use of therapy plan of care modifiers on claims containing ‘always therapy’ procedures. This is particularly problematic when physician and nonphysician providers bill outpatient therapy services, and when institutions bill for therapy services in non-therapist revenue centers. In CY 1999, over 87 percent of noninstitutional provider therapy claim lines did not contain the therapy modifiers required to track the caps. More than \$323 million in Part B therapy payments were not associated with a modifier in CY 1999, and this figure grew to over \$477 million in CY 2000.

For those claims that could be identified as being furnished by a therapist, payments for physical therapy, speech-language pathology, and occupational therapy were reduced by 27 to 64 percent in CY 1999, while payments to physician and nonphysician providers increased by 29 percent. In CY 2000, there were residual reductions in payments for speech-language pathology and occupational therapy of 55 and 39 percent respectively as compared to CY 1998.

Because of the significant amount of payments that could not be attributed to a particular type of service using the GN, GO, or GP modifiers (more than \$323 million in payments in CY 1999 did not have the required modifier) it is not possible to identify the number of individuals that may have exceeded one of the outpatient therapy caps. Even when payments are assigned to PT, OT, or SLP services by the specialty of the provider billing the services, more than \$204 million in payments to physicians and nonphysicians in CY 1999 cannot be attributed to a particular cap.

When identifying the claim billing provider specialty and therapy revenue center for CY 2000 utilization, sixty-six percent of Part B therapy payments can be attributed to physical therapy services, sixteen percent to occupational therapy, and six percent to speech-language pathology services. The remaining twelve percent were ‘other therapy.’

Due to Y2K constraints, CMS applied the caps per beneficiary per provider setting, and not per beneficiary as intended. The study found that many patients received services in excess of the cap amounts in CY 1999. They were able to receive these extended services in any setting, not just hospital outpatient settings, which had been exempt from the caps. As an example, enrollees among the top one percent most costly Part B therapy patients in CY 1999 averaged \$5,606 in payments per-patient, and accounted for 12.5 percent of the total Part B therapy payments that year. The only patients not permitted to receive care beyond the caps in CY 1999 were SNF residents, due to consolidated billing requirements.

National Claims History (NCH) data does not include information on patients whose providers stopped billing Medicare when the cap was reached, and who may have subsequently billed a secondary insurance or the beneficiary directly. In addition, if an institutional provider attempted to bill Medicare for services beyond the caps, the fiscal intermediary may have rejected the claim. Such claims are not included in CY 1999 NCH data. Therefore, no study can accurately state the total number of beneficiaries whose therapy expenditures exceeded one or both of the caps. Studies using claims data can only indicate the minimum number of patients known to have exceeded at least one cap. Further, the study found many patients whose Medicare payments did exceed the capped amount. Had the caps been imposed as intended, *at least* 56 thousand additional beneficiaries would have reached at least one cap ceiling in CY 1999, and the overall Part B therapy payment reductions of \$780 million would have been even more significant than the 34 percent drop observed.

Of those enrollees that were among the highest cost users of outpatient therapy services, and likely to surpass payment caps, a disproportionate number were: females, above 80 years of age; racial minorities; living in CMS Region VI-Dallas; and presenting with

clinical conditions such as stroke, hip fractures, Parkinson's disease, swallowing disorders, and musculoskeletal conditions affecting the knee, hip and shoulder.

Another remarkable finding in this study is the significant difference in the types of patient conditions treated in the nine types of practice settings where outpatient therapy services are performed. The clinical diagnoses that generate higher per-patient costs in institutional providers consistently represent the more complex neurological and orthopedic conditions. Noninstitutional providers typically treated less complex orthopedic conditions. In addition, in institutional settings that provide the full range of therapy services, the relative distribution of PT, SLP, and OT services varies markedly by claim diagnoses and between practice settings, clearly indicating the differences in practice patterns between the institutional settings.

6.3 Conclusion

The overall trend from CY 1998 to CY 2000 is that the application of the fee schedule to institutional providers created a relatively level playing field of payments to providers furnishing similar services, and created the significant cost reductions desired by Congress. Utilization of outpatient therapy services is shifting towards noninstitutional provider settings. The fee schedule markedly affected payments to institutional providers and certain geographic locations, which indirectly affected particular beneficiary demographic groups.

This study has identified that there are marked differences in the outpatient therapy population demographics as compared to the Medicare population. There are strong correlations which indicate that patients who are female, older, minorities, living in certain geographic regions, require the services of institutional providers (*see Figure H*), and those who suffer from complex medical conditions are more likely to require more costly outpatient therapy services than the general outpatient therapy population. Without consideration of these variables, payment policy changes may have an unintended impact upon particular groups of beneficiaries.

